

65

ROUTE

THE

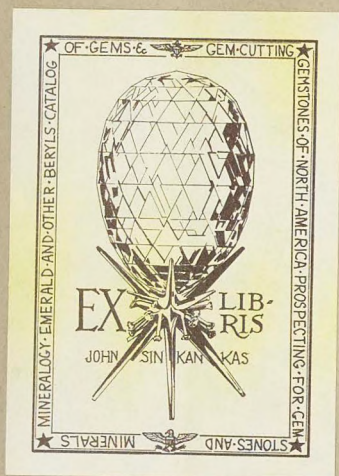
MINERALOGISTS'

COMPANION.

500 Sept 1971

Source, Davenport

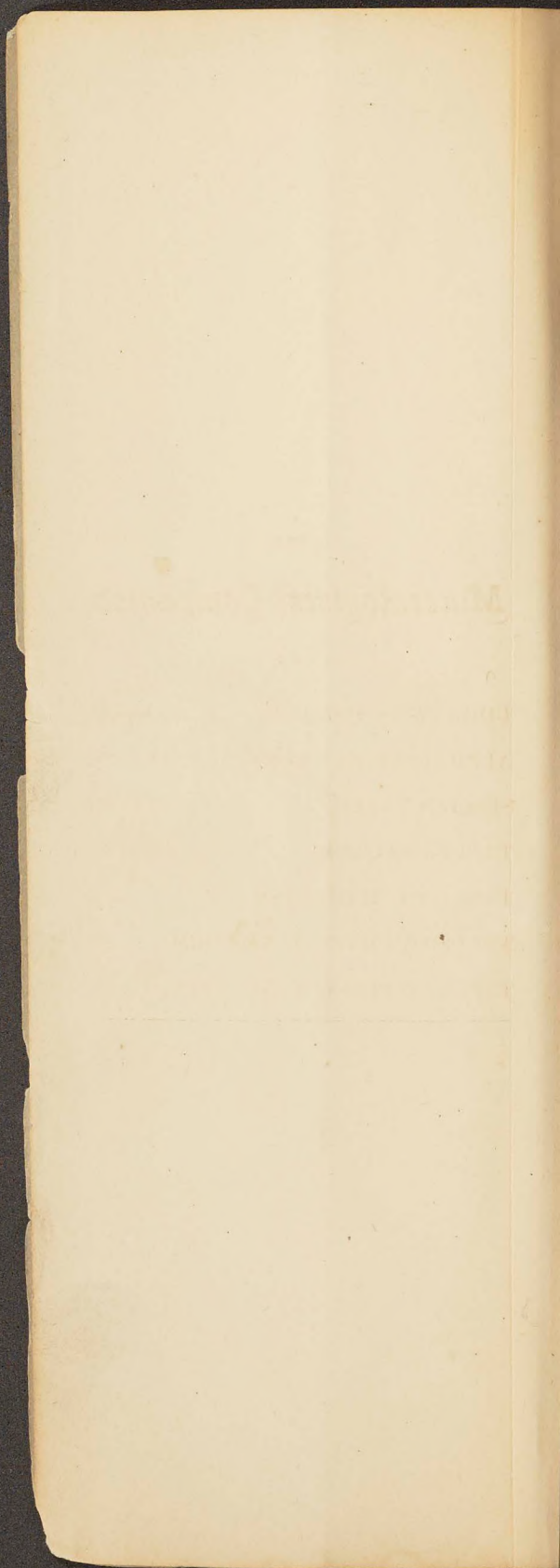
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THE

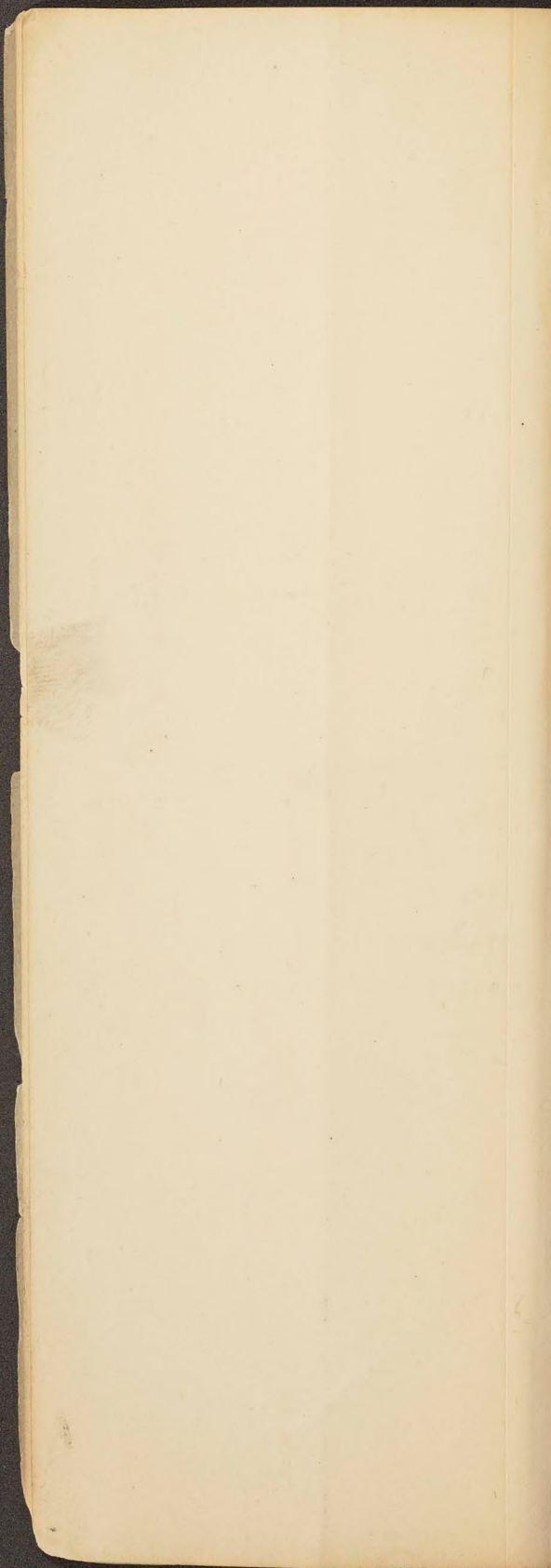
MINERALOGISTS'

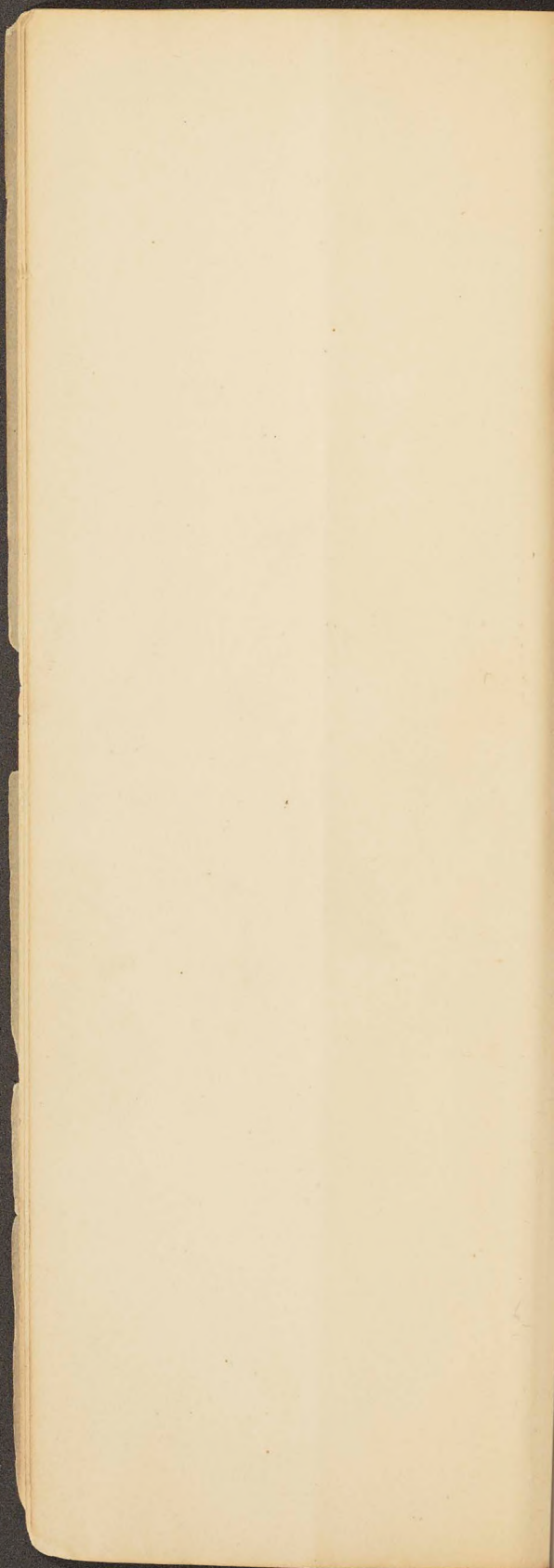
COMPANION.



THE
Mineralogists' Companion.

	PAGES.
DIRECTIONS FOR USE,	37 and 37a
ALPHABETICAL INDEX,	14 to 21
SPECIES TABLE,	22 to 37a
TABLE OF COLOR,	38 and 39
TABLE OF HARDNESS,	40
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PRICE

SPECIES AND THE LEADING VARI

It must be borne in mind that these prices are only certain that our prices are very low, and we hope, by the Exposition, to publish a lower price list at no very distant date. complete there are many that have never been priced. Species, and the number following, the page in Dana and cents.

386 Acadiolite 434.....50c. to \$1 00	383 Analcite 432.....
60 Acanthite 51.....2 00	194 Anatase 161.....
276 Achmatite 281.....50c. to 1 00	404 C. Anaxite 458.....
320 Achroite 367.....75c. to 2 00	322 Andalusite 371.....
240 H. Achtaragdit 478.....40c. to 2 50	312 Andesite 344.....
240 Acmite 224.....25c. to 1 00	Andrewsite Ap. 1-.....
247 Actinolite 234.....10c. to 1 00	524 Anglarite 556.....
237 Adamite 565.....75c. to 2 00	633 Anglesite 622.....
484 Adolpholite 525.....	632 Anhydrite 621.....
316 Adularia 352.....10c. to 2 00	717 Ankerite 685.....
239 Ægirite 223.....10c. to 2 00	527 Annabergite 560.....
480 Æschynite 522.....1 00 to 2 00	291 Annite 308.....
422 Agalmatolite 480.....25c. to 1 50	125 Annivite 103.....
715 Agaric Stone 680.....25c. to 50	310 Anorthite 337.....
231 Agate 194.....5c. to 5 00	246 Anthophyllite 231.....
231 Agatized Wood 194.....5c. to 2 00	247 Anthophyllite, Hyd.....
Agnesite 793.....	831 Anthracite 754.....
336 A. Agricolite Ap. 2-1.....	715 Anthraconite 677.....
124 Aikinite 100.....75c. to 2 00	816 Anthracoxenite 74.....
654 Alabaster 637.....10c. to 25	360 Anthrosiderite 477.....
238 Alalite 214.....25c. to 1 00	411 Antigorite 465.....
830 B. Albertite 753.....10c. to 50	Antimonarsennicke.....
370 Albin 415.....10c. to 1 00	29 Antimonite 29.....
315 Albite 343.....10c. to 5 00	18 Antimony, Native.....
299 Algerite 323.....25c. to 1 50	381 Antrimolite 430.....
38 Algodonite 37.....50c. to 3 00	686 Apatelite 657.....
347 Alipite 404.....75	492 Apatite 530.....
241 A. Allagite 227.....10c. to 25	715 Aphrite 678.....
278 Allanite 285.....10c. to 2 00	320 Aphrizite 365.....
19 Allemontite 18.....25c. to 1 00	403 Aphrodite 457.....
271 E. Allochroite 268.....50c. to 2 00	454 Aphrosiderite 502.....
97 Alloclasite 81.....25c. to 1 00	627 Apbthitalite 615.....
630 Allomorphite 616.....10c. to 25	125 B. Aphthonite 104.....
6 Allopalladium 12.....	679 Apjohnite 653.....
374 Allophane 419.....25c. to 1 00	370 Apophyllite 415.....
448 A. Allophite Ap. 2, 2.....	415 B. Aquacreptite Ap.....
Alluandite 542.....50c. to 2 00	254 Aquamarine 245.....
271 C. Almandite 267.....25c. to 1 00	724 Aragonite 694.....
727 Alstonite 698.....25c. to 1 00	795 A. Aragotite Ap. 2.....
48 Altaite 44.....1 00 to 5 00	284 A. Ardennite Ap. 2.....
681 Alum, Native 654.....10c. to 1 00	248 Arfvedsonite 243.....
659 Alum-stone 658.....50	715 Argentine 678.....
647 Alumian 631.....50c. to 1 00	40 Argentite 33.....
688 Aluminite 658.....10c. to 1 00	72 A. Arite Ap. 2-4.....
232 Alumocalcite 199.....50c. to 2 00	198 Arksansite 164.....
689 Alunite 658.....10c. to 1 00	165 Arksutite 128.....
671 Alunogen 643.....25c. to 50	10 Arquerite 14.....
470 Alvite 511.....75c. to 1 50	17 Arsenic 17.....
9 Amalgam 13.....75c. to 2 00	19 Arsenical Antimony.....
316 Amazon stone 355.....5c. to 50 00	71 A. Arsenical Cobalt.....
799 Amber 740.....25c. to 1 00	94 " Pyrites 7.....
503 Amblygonite 545.....25c. to 1 50	35 " Silver 35.....
802 Ambrite 741.....	" Silver Ble.....
799 B. Ambrosine Ap. 1-1.....	570 Arseniosiderite 584.....
231 Amethyst 193.....10c. to 50 00	570 Arsenocrocoite 584.....
597 Ammiolite 547.....50c. to 1 00	219 Arsenolite 183.....
673 Ammonia Alum 651.....1 00	94 Arsenopyrite 78.....
86 Amoibite 72.....50	33 A. Arsenotellurite.....
247 Amphibole 232.....10c. to 1 00	Arsenstibite Ap. 2-.....
574 Amphithalite 587.....1 00	247 Asbeferrite 234.....
310 Amphodelite 338.....50c. to 1 00	247 Asbestos 234, 216.....

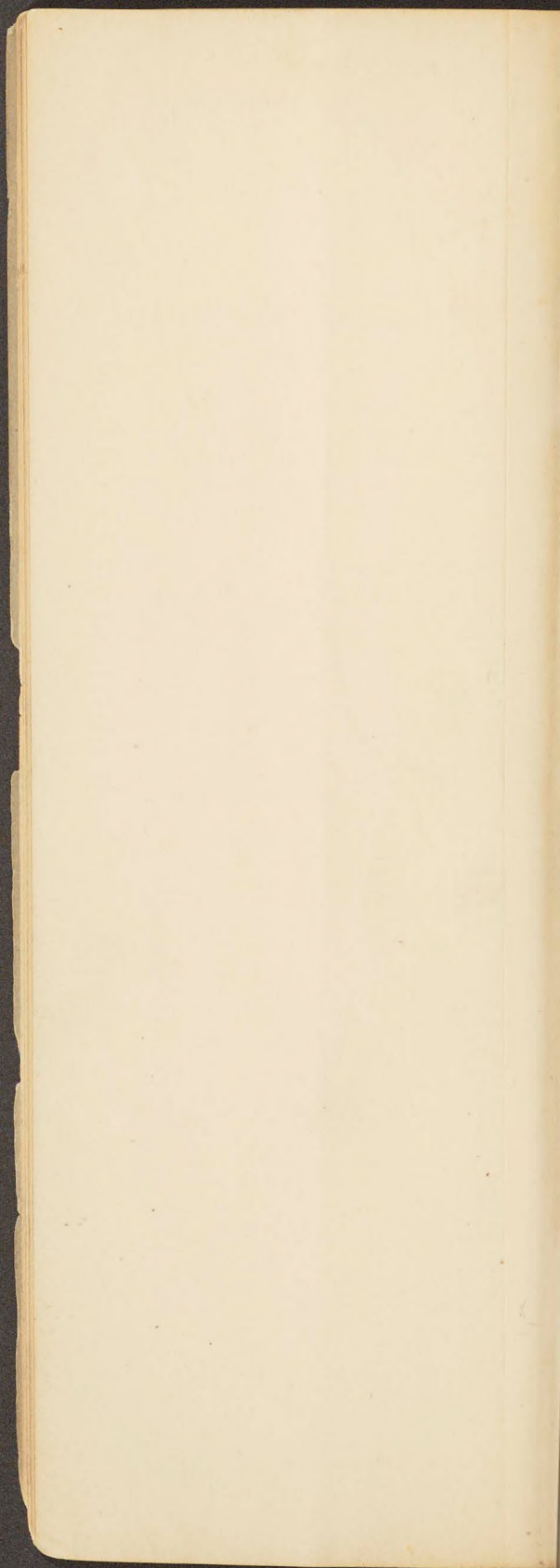
LIST

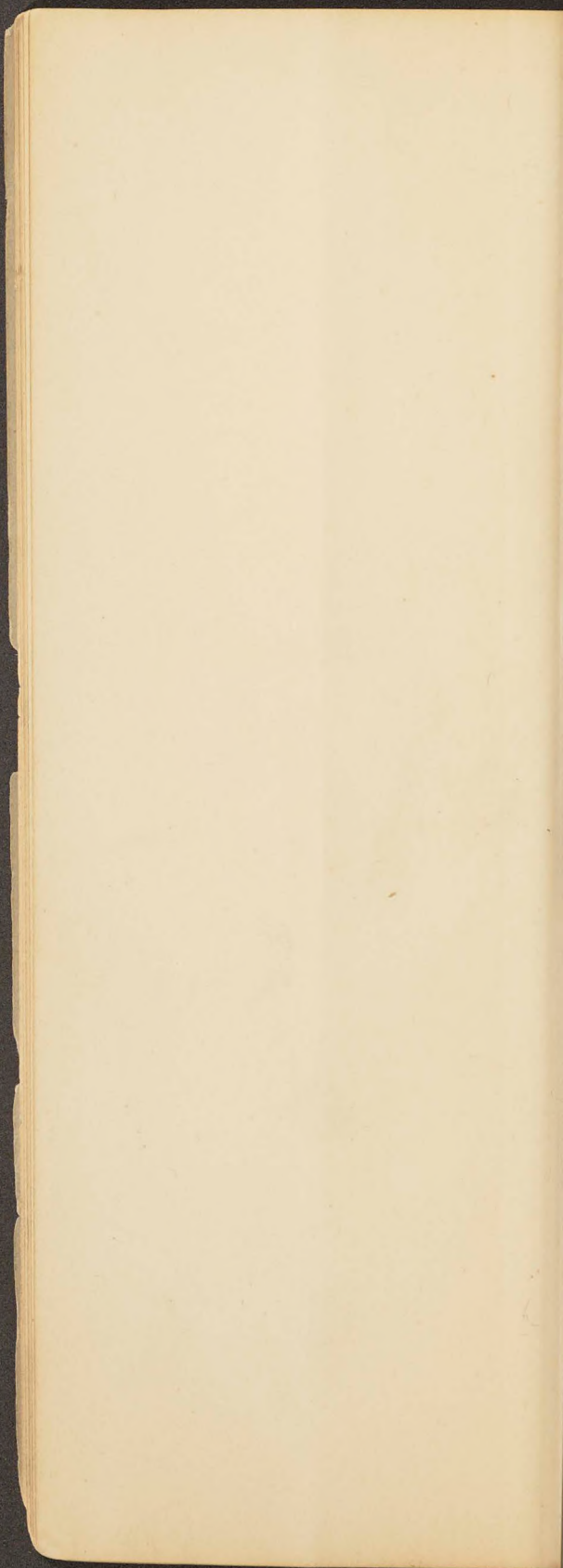
SPECIES OF CABINET SPECIMENS.

average and are constantly changing. We are by the arrangements we are making, during the instant date. Of course as the list of Species is

The number preceding the name indicates the on which the name is found. Price in dollars

.....10c. to \$2 00	218 Asbolan 181.....25c. to \$1 00
.....50c. to 6 00	231 B. Asmanite Ap. 2-5.....
.....1 00	492 Asparagus-stone 530....50c. to 1 00
.....25c. to 1 00	426 Aspasiolite 485.....50c. to 1 00
.....25c. to 75	830 Asphaltum 751.....10c. to 50
.....3.....	329 Aspidelite 383.....50c. to 1 00
.....50c. to 1 00	288 Aspidolite Ap. 1-2.....
.....25c. to 3 00	238 Asteroite Ap. 1-2.....
.....10c. to 50	659 Astracanite 643.....50c. to 1 00
.....25c. to 50	292 Astrophyllite 308.....25c. to 1 00
.....25c. to 50	153 Atacamite 121.....15c. to 2 00
.....25c. to 1 00	337 Atelestite 392.....50c. to 1 00
.....50c. to 2 00	299 Atheriastite 323.....50c. to 1 00
.....25c. to 1 00	752 A. Atlasite 716.....50c. to 2 50
.....25c. to 1 00	561 Attacolite 580.....
.....12.15c. to 50	272 E. Auerbachite 276.....1 00
.....10c. to 25	562 Augelite 580.....
.....10c. to 25	238 Augite 216.....10c. to 1 00
.....3.....	750 Aurichalcite 712 .....25c. to 1 50
.....75	185 Automolite 149.....25c. to 1 00
.....25c. to 1 00	573 Autunite 586.....50c. to 1 50
.....1 Ap. 2-3..	231 Aventurine, quartz, 193,50c. to 2 00
.....15c. to 25	316 " Feldspar, 355...25c. to 1 00
.....18...25c. to 2 00	285 Axinite 297.....25c. to 3 00
.....50c. to 1 00	832 Azorite 761 .....1 00
.....10c. to 1 00	551 Azure spar, or stone, 572.....1 50
.....10c. to 2 00	752 Azurite 715.....1 25 to 5 00
.....25c. to 50	212 Babingtonite 227.....50c. to 1 50
.....25c. to 1 00	278 Bagrationite 285.....50c. to 1 00
.....50c. to 1 00	238 Baikarite 215.....50c. to 1 00
.....25c. to 1 00	820 Bakerinite 747.....
.....	75 Ballesterosite 63.....25c. to 1 00
.....50c. to 1 00	411 Baltimorite 467.....25c. to 1 00
.....	323 Bamlite 373.....50c. to 1 00
.....25c. to 3 00	469 Baralite 796.....25c. to 2 00
.....12...10c. to 50	Barettite Ap. 1-3.....
.....25c. to 5 00	630 Barite 616 .....10c. to 2 00
.....10c. to 2 00	79 Barnhardtite 67.....1 00
.....4.....	552 Barrandite 574.....
.....4...50c. to 1 50	310 B. Barsonite 349.....75
.....50c. to 1 00	687 A. Bartholomite Ap. 2-6.....
.....25c. to 1 00	630 Baryt 616.....10c. to 2 00
.....50c. to 5 00	730 Barytocalcite 701.....25c. to 1 00
.....	311 Basalt 343.....25
.....5c. to 10 00	231 Basanite 195.....25c. to 1 00
.....50c. to 4 00	412 Bastite 469.....15c. to 50
.....2 00	732 A. Bastnäsite Ap. 1-2.....
.....25c. to 1 00	803 Bathvillite 742.....
.....18...25c. to 1 00	258 Batrachite 255.....25c. to 1 00
.....t Ap. 1-1.. 1 00	539 Bayldonite 565.....1 00
.....78...10c. to 1 00	208 Beauxite 174.....25c. to 50
.....1 00 to 5 00	600 Bechilite 597.....
.....ende...50c. to 5 00	231 Beekite 191.....25c. to 1 00
.....50c. to 2 50	788 Benzole 737.....
.....50c. to 2 50	524 Beraunite 558.....25c. to 50
.....50c. to 1 00	830 D. Bereugelite 753.....50c. to 1 00
.....10c. to 1 00	359 Bergholz 406.....50
.....Ap. 2-5....	378 Bergmannite 426.....50c. to 2 00
.....5.....	549 Berlinite 571.....
.....50c. to 1 00	104 Berthierite 86.....25c. to 1 00
.....10c. to 50	254 Beryl 245.....10c. to 7 50

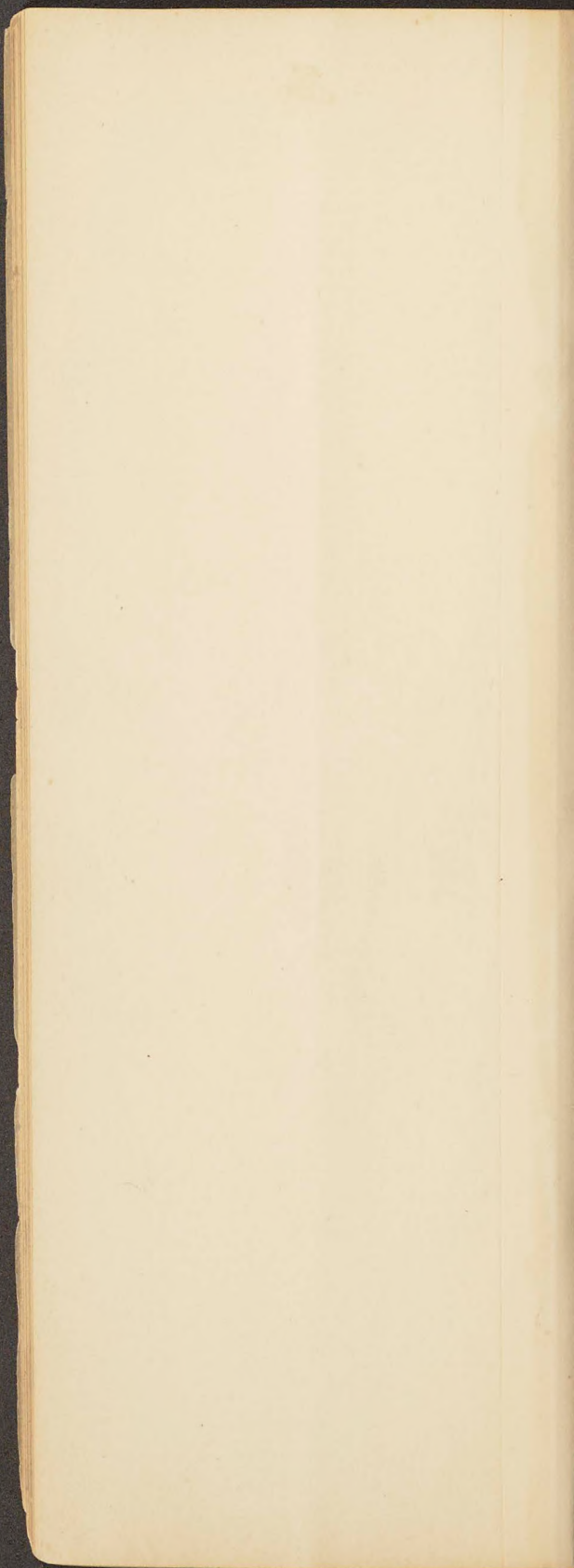


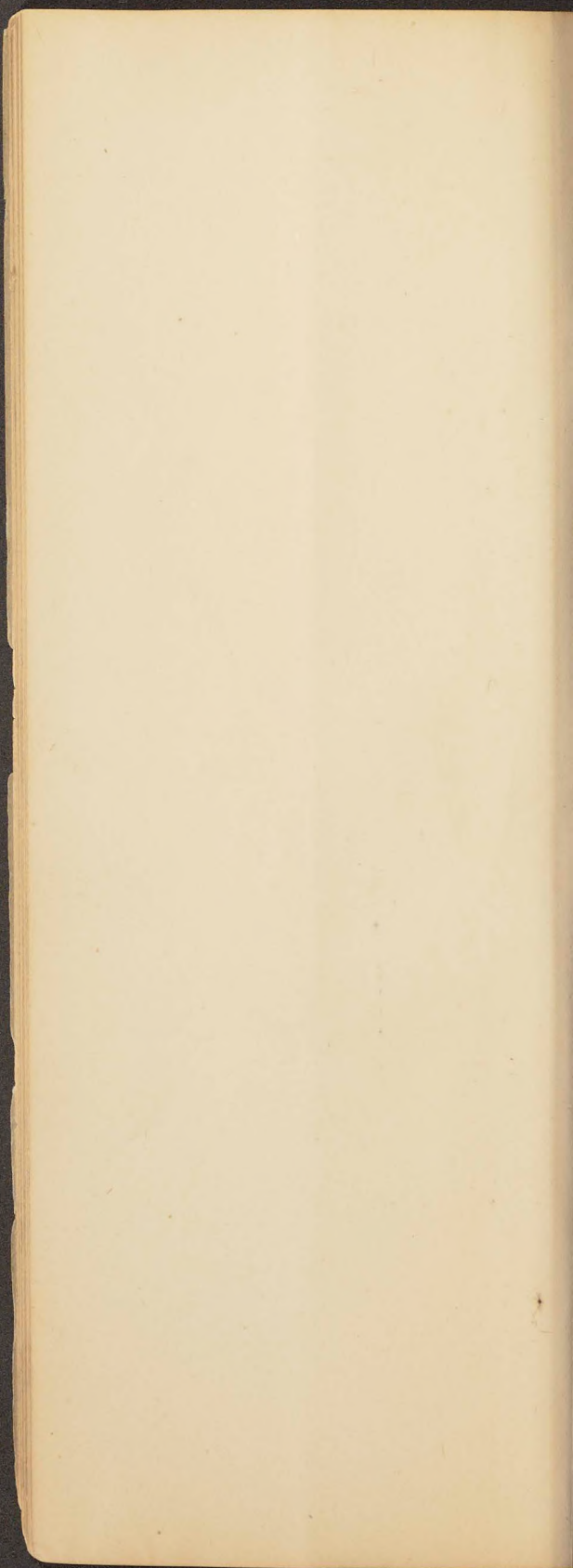


PRICE LIST OF SPECIES

254 Beryl 245 precious.....	25c. to \$9 00	231 Duhrstone 136	
50 Berzelianite 43.....		174 Dunsenite 134	
501 Berzeliite 544.....	1 00	750 Euratite 712	
707		241 Bustamite 225	
763		821 Butyrellite 747	
769	Beta Naptha Group 720	247 Byssolite 234	
770		310 C. Bytownite	
771		529 Cabrerite 561	
582 Beudantite 589.....	50c. to 1 00	231 Cacholong 199	
276 Beustite 281.....	50c. to 2 00	569 Cacozenite 584	
66 A. Beyrichite Ap. 1, page 3....		69 Cadmium Blen	
667 Bieberite 647.....	75	231 Cairngorm Sto	
424 Biharite 483.....		331 Calamine 407	
586 Bindheimite 501.....	25c. to 2 00	247 Calamite 233	
110 Binnite 90.....	25c. to 1 00	98 A. Calaverite 7	
289 Biotite 304.....	10c. to 50	715 Calcareous Spa	
222 Bismite 185.....	25c. to 1 00	715 Calcareous Tuf	
336 Bismuth Blende 391.....	25c. to 1 00	231 Calcedoine 194	
20 " Cobalt.....	50c. to 2 00	557 Calcioferrite 5	
222 " Ochre 185.....	25c. to 1 00	715 Calcite 670	
20 Bismuth 19.....	25c. to 1 00	636 Caledonite 625	
31 " Telluric 30.....	1 00	550 Callinite 572	
Bismuthaurite 795.....		136 Calomel 111	
31 Bismuthine 30.....	1 00	494 Campylite 537	
753 Bismutite 716.....	1 50	299 Canaanite 803	
Bismutoferrite Ap. 1-3.....		304 A. Cancrinite	
716 Bitter Spar 682.....	25c. to 1 00	831 Cannel Coal 7	
820 Bitumen 751.....	10c. to 50	782 Caoutchout Mi	
782 Bitumen, Elastic 780.....	15c. to 50	63 Capillary Pyri	
831 Bituminous coal 754.....	5c. to 1 00	343 Caporcianite 3	
56 Black Jack 48.....	5c. to 1 00	24 Carbonado 22	
183 Black Spinel 147.....	5c. to 2 00	502 Carminite 545	
675 Blakeite 652.....		147 Carnallite 118	
586 Bleinierite 591.....	25c. to 2 00	231 A. Carnelian	
56 Blende 48.....	5c. to 1 00	374 A. Carolathine	
115 " Fire.....	5 00 to 15 00	373 Carpholite 419	
117 " Ruby 94.....	10c. to 1 00	692 Carposiderite	
659 Blöditte 643.....	25c. to 1 00	82 Carrollite 69	
231 Blood Stone 194.....	25c. to 1 50	192 Cassiterite 157	
551 Blue Feldspar 572.....	25c. to 1 50	316 Cassinite 356	
524 Blue Iron Earth 556.....	25c. to 1 00	330 Castellite 386	
159 Blue John 123.....	10c. to 5 00	51 Castillite 46	
669 " Vitriol 643.....	25c. to 1 00	244 Castor 229	
24 Boart (Diamond) 21.....	1 00 to 5 00	344 Catapleite 40	
523 A. Bobierite 795.....		423 Cataspilite 48	
279 A. Bodenite 289.....	50	Catlinite 795	
206 Bog Iron Ore 172.....	5c. to 25	231 Cat's-eye 193	
420 Bole 476.....	25c. to 50	630 Cawk 616	
135 Bolivianite 109.....		410 Celadonite 46	
630 Bolognian Stone 616.....	25c. to 1 00	90 Cellular Pyrit	
257 Boltonite 255.....	10c. to 25	631 Celestite 619	
815 A. Bombicite Ap. 2-8.....		341 A. Centrallass	
426 Bonsdorffite 485.....	50c. to 1 00	140 Cerargyrite 1	
597 Boracite 535.....	25c. to 1 00	151 Cerasine 120	
599 Borax 597.....	10c. to 1 00	367 Cerite 413	
144 A. Bordosite Ap. 2-8.....		414 Cerolite 470	
576 Borickite 588.....	50	729 Cerussite 700	
49 Bornite 44.....	10c. to 1 00	227 Cervantite 18	
602 Boronatrocalcite 508.....	25c. to 1 00	183 Ceylanite 147	
680 Bosjemanite 654.....	75	381 Chabazite 434	
687 Botryogen 657.....	50	639 Chalcantithe	
327 Botryolite 380.....	25c. to 1 00	231 Chalcedony 1	
122 Boulangerite 99.....	25c. to 1 00	61 Chalcoite 52	
119 Bournonite 96.....	25c. to 2 00	407 Chalcodite 4	
651 Boussingaultite 635.....		572 Chalcolite 58	
411 Bowenite 465.....	25c. to 50	Chalcomiclite	
272 F. Bragite 276.....	1 50	370 A. Chalcomor	
784 Branchite 786.....	50c. to 2 50	548 Chalcopyllite	
431 Brandisite 508.....	15c. to 1 00	78 Chalcopyrite	
196 Braunite 163.....	50	68 A. Chalcopyrr	
238 Breislakite 216.....	25c. to 1 00	568 Chalcosiderite	
72 Breithauptite 61.....	50c. to 1 00	101 Chalcostibite	
718 Breunnerite 686.....	10c. to 50	172 Chalcotrichite	
378 Brevicite 426.....	50c. to 1 00	715 Chalk 679	
395 Brewsterite 445.....	25c. to 1 00	721 Chalybite 688	
833 Brewsterlinite 761.....		Chalypite Ap.	
701 Brochantite 664.....	50c. to 1 00	469 Chamoisite 51	
727 Bromlite 698.....	25c. to 1 00	83 Chathamite 7	
142 Bromyrite 116.....	1 00	299 Chelmsfordite	
111 Bronznardite 90.....		567 Chenevixite	
233 Bronzite 215.....	25c. to 50	231 Chert 195	
198 Brookite 164.....	5c. to 10 00	316 Chesterlite 2	
716 Brossite 682.....	25c. to 1 00	752 Chessy Coppe	
210 Brucite 175.....	10c. to 2 00	322 Chiastolite 3	
823 Brücknerellite 748.....		560 Childrenite 5	
518 Brushite 552.....		623 Chilleite 612	
801 Bucaramangite 741.....		36 Chilenite 36	
323 Bucholzite 373.....		166 Chiolite 128	
278 Bucklandite 285.....	50c. to \$1 00	103 Chiviatite 86	
		83 Chloanthite	

.....\$ 25	364 Chlorastrolite 41.....5c. to \$10 00
.....25c. to 1 00	452 Chlorite 501.....5c. to 1 00
.....25c. to 1 00	414 Chlorite-like Mineral 493.....
.....25c. to 1 00	458 Chloritoid 504..... 50
.....25c. to 1 00	138 A. Chlorocalcite Ap. 2-11.....
.....50	408 Chloropal 451.....25c. to 50
.....1 50	467 Chlorophaeite 510..... 50
.....15c. to 50	159 Chlorophane 123.....10c. to 50
.....50c. to 1 00	409 Chlorophanerite 462..... 50
de 5).....10c. to 1 00	237 Chlorophyllite 301, 485.....25c. to 1 00
ne 193.....5c. to 25 00	183 Chlorospinel 147..... 75
.....5c. to 5 00	167 Chodonefite 128.....
.....50c. to 1 00	532 Chondarsenite 562..... 50
.....1 00 to 2 00	319 Chondrodite 363.....10c. to 2 00
ar 670.....5c. to 5 00	446 Chonicrite 494..... 75
a 680.....10c. to 1 00	773 Chrismatite 728..... 75
.....5c. to 1 00	310 Christianite 337, 438..... 75
.....5c. to 1 00	464 Chrome Ochre 519.....50c. to 1 00
.....5c. to 5 00	189 Chromic Iron 153.....5c. to 50
.....1 00	189 Chromite 153.....5c. to 50
.....75	191 Chrysoberyl 155.....25c. to 2 00
.....25c. to 1 00	346 Chrysocolla 402.....10c. to 1 00
.....25c. to 1 00	259 Chrysolite 256.....25c. to 1 00
.....25c. to 1 00	261 Chrysolite Iron-manganese 259
.....25c. to 1 00	231 Chrysoprase 194, 246.....25c. to 2 00
.....25c. to 1 00	411 Chrysotile 465.....10c. to 3 00
.....10c. to 50	521 Churchite 555.....
neral 734.....10c. to 50	404 Cimolite 457..... 50
tes 56.....25c. to 1 00	64 Cinnabar 55.....10c. to 5 00
.....1 00	64 Cinnabar hepatic 55.....25c. to 50
.....1 00	263 Cinnamon Stone 266.....15c. to 1 00
.....25c. to 1 00	559 Cirrolite 579.....
.....10c. to 50	231 Citrine.....25c. to 1 00
.....50c. to 2 00	Clarite Ap. 2-12.....
.....50c. to 1 00	221 A. Claudetite 793.....
.....50c. to 1 00	45 Clausthalite 42..... 1 00
.....50c. to 1 00	419 Clay 473.....5c. to 25
.....50c. to 1 00	180 Clay Iron Stone 141.....15c. to 50
.....50c. to 5 00	134 Clayite 108.....
.....25c. to 50	315 Cleavelandite 348.....15c. to 25
.....75c. to 1 25	450 Clinoclone 407.....25c. to 1 00
.....10c. to 10 00	547 Clinoclasite 570..... 75
.....1 00	461 Clintonite 508.....15c. to 1 00
.....1 00	383 Cluthalite 433..... 50
.....10c. to 50	831 Coal, Mineral 753.....5c. to 50
.....25c. to 2 00	71 A. Cobalt, Arsenical Ap. 1-1..... 1 00
.....10c. to 50	526 Cobalt Bloom 558.....10c. to 2 50
.....15c. to 50	83 " Tin White 70..... 75
.....15c. to 50	85 Cobaltite 71.....10c. to 1 00
.....10c. to 1 00	144 Coccinite 117.....
.....10c. to 3 00	75 Cockscomb Pyrites 90.....25c. to 1 25
.....2 50	238 Cocolite 214.....10c. to 50
.....25c. to 1 00	554 C. Coeruleolactite Ap. 1-3..... 1 00
.....10c. to 50	375 Collyrite 420.....25c. to 50
.....10c. to 3 00	271 Colophonite 209.....15c. to 50
.....25c. to 1 00	474 Columbite 515.....10c. to 5 00
.....25c. to 1 00	377 Comptonite 424.....25c. to 50
.....25c. to 1 00	348 Conarite 405.....
.....25c. to 1 00	37 Condurrite 36, 797..... 75
.....25c. to 1 00	538 Conichalcite 565.....
.....25c. to 1 00	716 Conite 682..... 50
.....25c. to 1 00	639 Connellite 627..... 5 00
.....25c. to 1 00	434 Cookeite 499.....10c. to 1 00
.....25c. to 1 00	798 Copalite 739.....25c. to 50
.....25c. to 2 50	685 Copiapite 656..... 50
Ap. 2-11.....	12 Copper 14.....10c. to 5 00
phite Ap. 2-11.....	61 Copper Glance 52.....25c. to 1 00
e 571.....25c. to 1 00	125 Copper, Gray 101.....25c. to 2 00
65.....10c. to 1 00	71 Copper, Nickel 60.....25c. to 1 00
hotite Ap. 2-11.....	171 Copper, Red 133.....10c. to 1 50
e 583.....75c. to 1 50	62 Copper, Vitreous 52.....10c. to 1 50
85.....1 00	78 Copper Pyrites 65.....10c. to 3 00
a 133.....25c. to 1 00	664 Copperas 646.....25c. to 1 00
.....05c. to 1 00	691 Copperasine 660..... 50
.....5c. to 5 00	490 B. Coprolites 534.....
.....2-11.....	672 Coquimbite 650..... 50
.....50	545 Cornwallite 569..... 2 00
.....50	457 Corundophilite 564..... 1 00
.....50	179 Corundum 137.....5c. to 2 00
.....25	88 A. Corynite 74.....
.....5c. to 25	112 A. Cosalite 797.....
.....10c. to 1 00	145 Cotunnite 117.....25c. to 1 00
.....10c. to 5 00	302 Couzeranite 326..... 50
.....10c. to 50	100 Covellite 83.....25c. to 1 00
.....10c. to 2 00	200 Crednerite 166..... 50
.....75	249 Crocidolite 243..... 75
.....75	642 Crocoite 629.....25c. to 5 00
.....75	456 Cronstedtite 503..... 2 50
.....75	43 Crookesite 40.....
.....75	322 Cross Stone 371.....25c. to 1 00

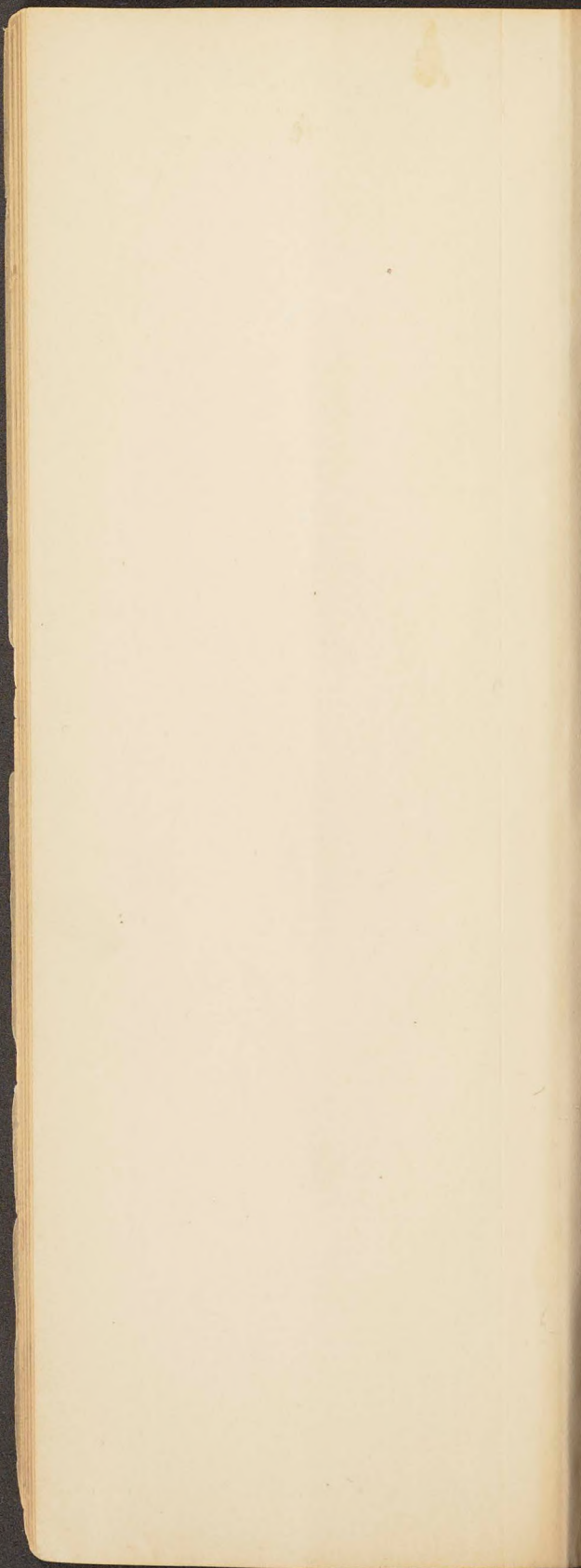


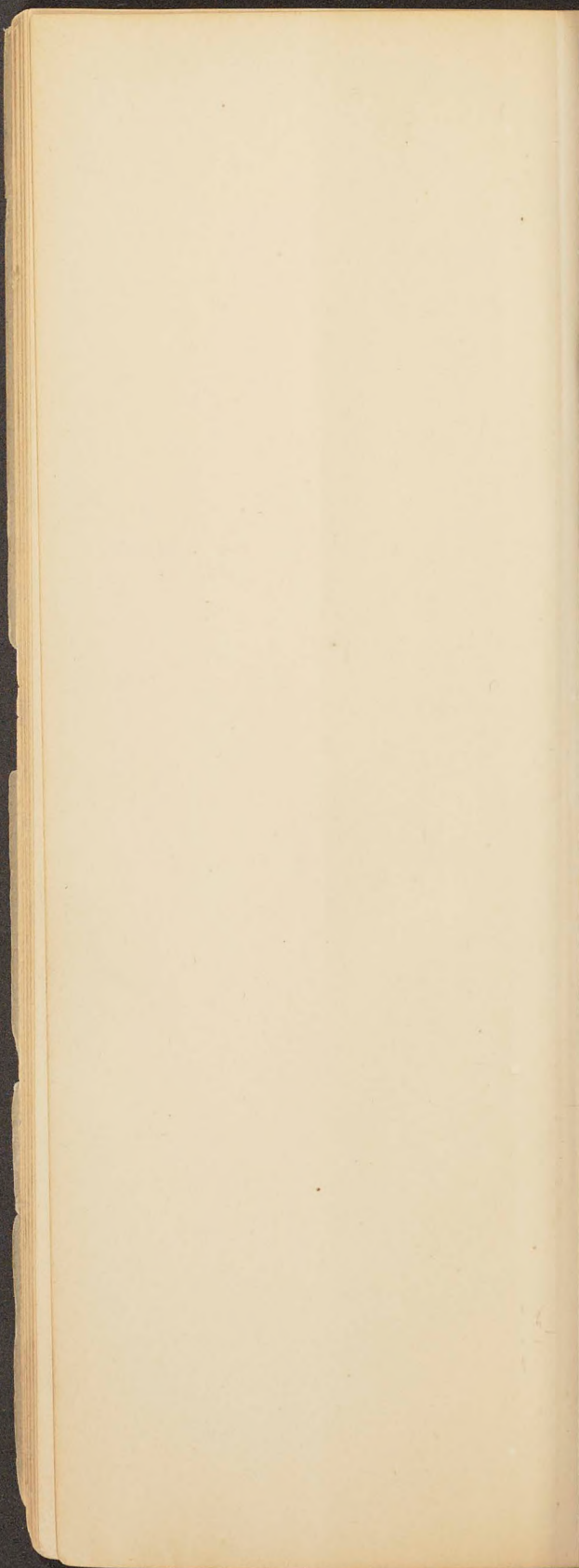


Cryoconite Ap. 2-13	\$	526 Earthy Cobalt
164 Cryolite 126	10c. to 1 50	237 A. Edelforsite 215
295 Cryophyllite 316	50	247 Edenite 235
491 Cryptolite 529	1 00	371 Edingtonite 417
834 Cryptolinite 762		496 Edwardsite 539
603 Cryptomorphite 591	25c. to 1 00	273 Egeran 276
Crystallites Ap. 2-14		543 Ehlite 568
77 Cubanite 65	10c. to 50	404 B. Ehrenbergite
558 Cube ore 578	25c. to 2 00	300 Ekebergite 324
383 Cubizite 432	25	436 Ekmannite 490
Culsageite Ap. 2-30		304 Elaeolite 327
229 Cumengite 188	1 25	782 Elastic Bitumen
241 Cumingtonite 225	50	782 Elaterite 731
791 Cumole 737		209 Eliasite 175
172 Cuprite 133	10c. to 1 50	380 Ellagit 430
669 A. Cupromagnesite Ap. 2-14		141 Embolite 115
44 B. Cuproplumbite 42		234 Emerald 245
615 Cuproscheelite 606	50c. to 2 00	747 Emerald Nickel
615 A. Cuprotungstite Ap. 2-14		179 Emery 138
324 Cyanite 375	10c. to 1 00	459 Emerylite 503
343 A. Cyanochalcite Ap. 1-4		102 Emplectite 86
670 Cyanochroite 649		132 Enargite 107
341 B. Cyanolite 797		775 Endecalyene 72
669 Cyanosite 648	1 00	234 Enstatite 208
703 Cyanotrichite 663	1 50 to 3 00	617 Eosite Ap. 1-5
310 A. Cyclopit 340		122 A. Epiboulanger
792 Cymole 737		441 Epichlorite 493
273 Cyprine 276	50c. to 1 25	276 Epidote 281
272 B. Cyrtolite 275	75	132 A. Epigenite Ap.
59 Dalmenzite 51		490 E. Epiphosphor
430 Damourite 487	25c. to 50	393 Epistilbite 413
91 Danaite 78	25c. to 1 00	661 Ipsomite 643
270 Danalite 265	25c. to 1 00	368 Erdmannite 285
283 Danburite 299	15c. to 50	544 Erinte 569
327 Datolite 380	10c. to 5 00	Elanite 797
304 Davyne 327	50	49 Erubescite 41
Dawsonite Ap. 2-16		526 Erythrite 558
777 Decatrylene 729		148 Erythrosiderite
774 Decatylene 729		Esmarkite Ap. 2
619 Dechenite 609	1 00	269 Essonite 266
435 Degeroite 489	1 25	668 A. Ettringite Ap.
178 A. Delafossite Ap. 2-16		42 Eucairite 39
816 Delawarite 356	15c. to 50	540 Euchroite 566
449 Delessite 497	25c. to 75	326 Euclase 379
563 Delvauxite 583	50	255 Eudialyte 248
346 Demidoffite 403	50	384 Eudnophite 433
218 Dendrites 181	10c. to 25	326 Euklas 379
218 Dendritic Manganese 181	10c. to 25	260 Eulysite 259
159 Derbyshire Spar 123	25c. to 1 00	336 Eulytite 391
415 A. Dermatin 471	50	198 A. Eumanite 16
620 Desclozite 609		807 Euosmite 743
702 Devilline 665	75	432 Euphyllite 488
413 Deweylite 469	15c. to 50	619 Eusynchite 609
236 Diacrasite 210		479 Euxenite 521
583 Diadochite 588		571 Evansite 585
238 Diallage (green) 215	10c. to 50	125 Fahlerz 100
722 Diallogite 691	50	426 Fahlnite 484
24 Diamond 21	1.00 to 35 00	132 B. Famatinitite A
474 Dianite 516	1 00	378 Fargite 426
113 A. Diaphorite Ap. 1-4		377 Faröelite 424
203 Diaspore 168	15c. to 2 00	238 Fassite 216
287 Dichroite 299	25c. to 1 00	385 Faujasite 433
375 A. Dillnite 421	25c. to 75	603 Fausserite 645
185 A. Dimagnetite 151		260 Fayalite 258
28 Dimorphite 28		112 Feather Ore 91
786 Dinite 733		316 Feldspar 352
238 Diopside 214	25c. to 1 50	316 Feldspar, Green
345 Dioprase 401	50c. to 10 00	316 " avan'ur
302 Dipyre 326	35	316 Feldspar, pink 3
35 Di-crasite 35	1 00	Feldspar, Labrador
185 Disluite 149	25c. to 75	695 Felsobanyite 66
461 Disterrite 508	50c. to 1 00	612 Ferberite 604
324 Disthene 375	15c. to 1 00	483 Fergusonite 524
776 Dodecatylene 729		685 Fibroferite 656
715 Dog-Tooth Spar 672	10c. to 3 00	323 Fibrolite 373
634 B. Dolerophanite Ap. 2-17		784 Fichtelite 735
716 Dolomite 681	10c. to 1 50	585 Ficinitite 590
37 Domeykite 36	1.00 to 5 00	422 Figure Stone 48
826 Dopplerite 747, 749	50	232 Fiorite 199
637 Dreelite 626		115 Fire blende 91
79 Ducktownite 68	50	232 Fire Opal 198
459 A. Dudleyite Ap. 2-17		565 Fischerite 512
563 Dufrenite 583	25c. to 1 00	231 Flexible Sandstone
113 Dufrenoyite 92	40	231 Flint 195
455 A. Dumasite 503		232 Float Stone 193
503 A. Durangite Ap. 1-4	5c. to 50	724 Flosferri 694
35 Dyscrasite 35	50	163 Fluellite 126
185 Dysluite 149	25c. to 5 00	162 Fluocerite 126
818 Dysodile 743	50	161 Fluocerite 126
422 Dysyntribite 479	50	159 Fluorite 123

TS' AGENCY CATALOGUE.

Bloom 559.....\$ 25	153 Fluor Spar 123.....05c. to \$10 00
12.....25	93 Foliated Tellurium 82.....1 50
.....25c. to 1 00	715 Fontainebleau Limestone 678 1 00
.....1 00	257 Forsterite 255.....15c. to 50
.....25c. to 1 00	241 Fowlerite 225.....10c. to 1 00
.....50c. to 1 00	492 Francolite 530.....50
458.....50	188 Franklinite 152.....05c. to 10 00
.....25c. to 1 00	125 Freibergite 101.....25c. to 75
.....10c. to 1 00	114 Freieslebenite 93.....3 00
734.....15c. to 50	299 Fuchsite 319.....50
.....10c. to 50	Fulgurite.....50c. to 2 50
.....1 00	299 Gabbroite 321.....25c. to 50
.....25c. to 5 00	282 Gadolinite 293.....15c. to 2 50
.....1 00 to 10 00	Gaebhartite.....
710.....25c. to 1 00	185 Gahnite 149.....10c. to 3 00
.....15c. to 1 00	378 Galactite 427.....50
.....15c. to 50	44 Galena 40.....15c. to 5 00
.....25c. to 1 00	Galenei.....10c. to 5 00
.....15c. to 1 00	44 Galenite 40.....05c. to 5 00
.....25c. to 1 00	209 Garnet 265.....05c. to 5 00
.....25c. to 1 00	739 Gay-lussite 706.....25c. to 50
.....25c. to 1 00	170 Gearsutite 130.....50c. to 1 25
rite Ap. 1-5.....75	246 Gedrite 231.....25c. to 50
.....5c. to 5 00	321 Gehlenite 370.....25c. to 50
.....50	416 Genthite 471.....25c. to 1 00
ite 535.....50	822 Geocerillite 748.....
.....25c. to 1 00	796 Geocerite 738.....
.....50	129 Geocronite 105.....50
.....15c. to 1 00	231 Geode Quartz.....25c. to 1 00
Ap. 2-19.....50	797 Geomyricite 739, 798.....
2-19.....15c. to 1 00	86 Gersdorffite 72.....50
p. 2-19.....2 50	232 Geyserite 199.....25c. to 1 00
.....3 00	212 Gibbsite 177.....10c. to 1 00
.....75	715 Gibraltar Stone 680.....25c. to 1 00
.....3 00	422 Gieseckite 479, 329.....25c. to 1 00
.....50	Gigantolith.....50
.....15c. to 1 00	429 A. Gilbertite 798 and Ap. 2-24 25
.....25c. to 2 00	439 Gillingite 492.....
Ap. 2-19.....50	372 Gismondite 418.....50c. to 1 00
2-19.....15c. to 1 00	420 Glagerite 476.....75
p. 2-19.....2 50	316 Glassy Felspar 355.....15c. to 50
.....3 00	640 Glauberite 627.....10c. to 1 00
.....75	Glance Spar, Ap. 2-24.....
.....3 00	93 A. Glancopyrite Ap. 1-6.....
.....50	95 Glaucodot 80.....50c. to 1 50
.....75	409 Glaucosite 402.....25c. to 50
.....3 00	251 Glaucophane 244.....
.....50	Glimmer.....10c. to 2 00
.....75	259 Glinkite 256.....50
.....1 00	568 Globosite 581.....25c. to 1 00
.....25c. to 1 00	696 Glockerite 662.....
.....75	420 Glossecollite 475.....50
.....1 00	387 Gmelinite 436.....25c. to 1 00
.....25c. to 1 00	316 Gneiss 359.....10 10
.....75	1 Gold 3.....25c. to 10 00
.....25c. to 2 50	11 Gold amalgum 14.....
.....75	432 Gongylite 481.....50c. to 1 00
p. 2-20.....50	254 Goshenite 245.....25
.....50c. to 1 00	666 Goslarite 647.....25c. to 1 00
.....25c. to 1 25	214 Göthite 169.....5c. to 4 00
.....50	830 A. Grahamite 753.....10c. to 25
.....75	247 Grammatite 238.....25
.....50	316 Granite 359.....5c. to 25
.....25c. to 75	316 Granite, Graphite 359.....5c. to 25
.....5c. to 100 00	98 Graphite Tellurium 81.....50c. to 1 00
352.....5c. to 100 00	25 Graphite 21.....5c. to 1 00
ine 352.....25c. to 1 00	409 Green Earthy 462.....25c. to 50
352.....25c. to 5 00	69 Greenockite 59.....15c. to 1 50
lor.....25c. to 2 00	329 Greenovite 383.....1 25 to 5 00
.....75	453 Grengesite 501.....
.....50c. to 2 00	Grey Copper.....25c. to 2 50
.....25c. to 1 50	427 Groppite 486.....
.....15c. to 1 00	269 Grossularite 206.....35c. to 1 00
.....1 00	330 Grothite 386.....50
.....25c. to 1 50	55 Grünauite 47.....
.....50	247 Grunerite 234.....
.....10c. to 5 00	458 B. Guadalcazarite Ap. 2-25.....
.....50	490 D. Guano 535.....10c. to 1 00
.....5 00 to 20 00	652 A. Guanovulite Ap. 2-64.....
.....10c. to 5 00	228 Guarinite 383.....50
.....1 00	422 A. Gümbellite Ap. 1-6.....
.....25c. to 1 00	216 Gummite 179.....
.....5c. to 25	716 Gurhofite 682.....25c. to 2 50
.....25c. to 1 00	813 Guyaquillite 745.....
.....25c. to 5 00	654 Gypsum 637.....10c. to 1 00
.....3 00	342 Gyr-lite 398.....
.....75	66 Haarkies 56.....15c. to 5 00
.....05c. to 10 00	169 A. Hagemannite 130.....25c. to 2 00
	517 Haidingerite 552.....
	66 Hair Nickel 56.....15c. to 5 00

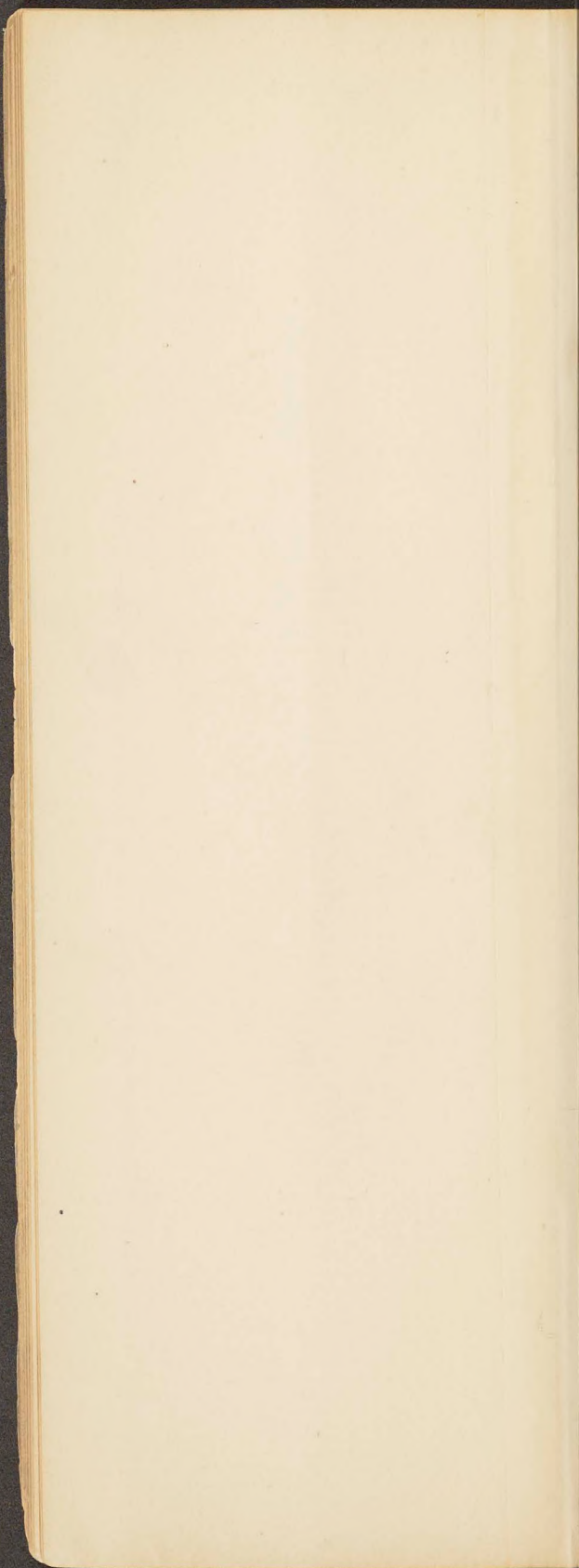


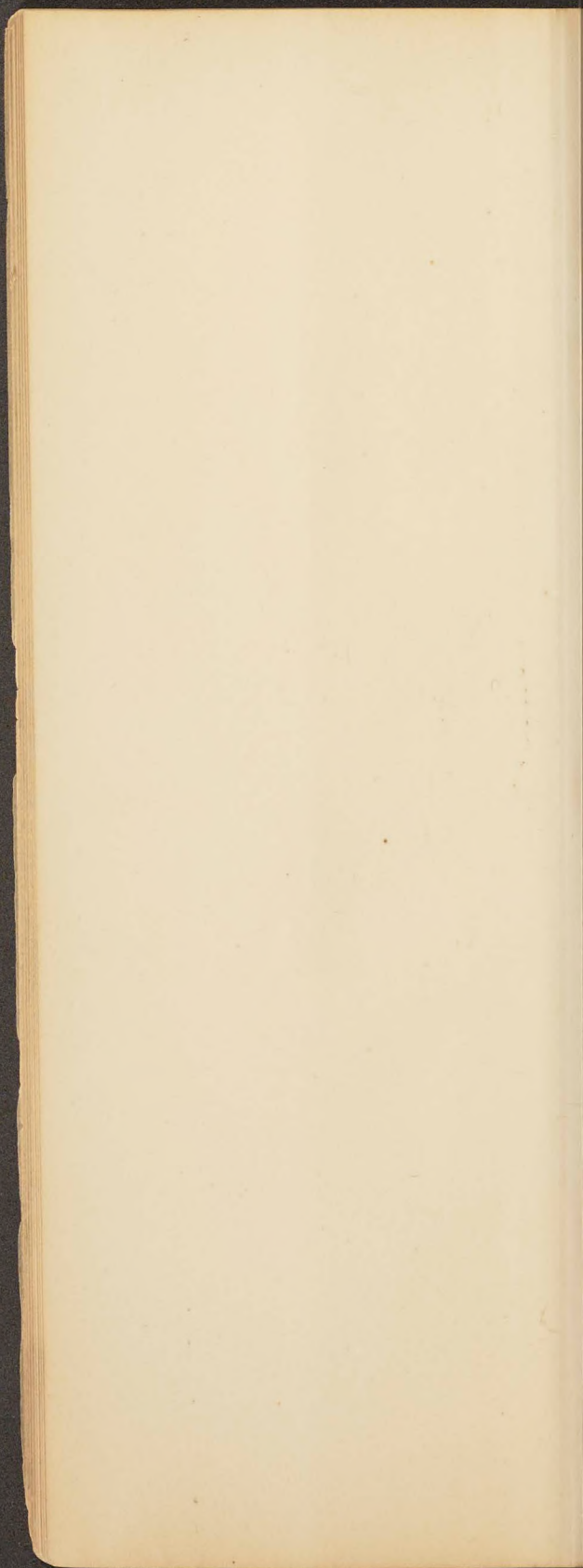


PRICE LIST OF SPECIES

138 Halite 112.....	10c. to 1 60	574 A. { Hydrous	
445 C. Hallite Ap. 2-26.....	10c. to 1 50	90 { of Alumina	
420 Halloysite 475.....	25c. to 1 00	90 Hydrous Pyrit	
681 Halotrichite 654.....	15c. to 75	214 Hydrotalcite 1	
390 Harmotome 439.....	25c. to 5 00	262 A. Hydrotaph	
831 Hard Coal 755.....	5c. to 50	749 Hydrozincite	
61 C. Harrisite 53.....	5 00	442 B. Hygrophil	
785 Hartite 736.....	50	236 Hypersthene	
779 Hatchettite 731.....	75	338 Hypochlorite 3	
76 Hauerite 64.....	1 50	315 Hyposclerite 3	
195 Hausmannite 102.....	25c. to 1 00	391 Hypostilbite 4	
307 Häuynite 332.....	25c. to 1 00	Hypoxanthite	
386 Haydenite 434.....	75	181 Hystatite 143.	
602 Hayesine 599.....	10c. to 50	715 Iceland Spar 6	
327 Haytorite 382.....	1 25	370 Ichthyophthal	
630 Heavy Spar 616.....	5c. to 5 00	795 Idrialite 738..	
503 B. Hebronite Ap. 2-27.....	25c. to 1 00	273 Idocrase 276..	
208 Hedenbergite 215.....	25c. to 75	729 Iglesiasite 800	
404 Hedyphane 537.....	2 00	181 Ilmenite 143..	
231 Heliotrope 194.....	5c. to 1 00	214 A. Ilsemanite	
271 Helvite 264.....	50	284 Ilvaite 296.....	
180 Hematite 140.....	5c. to 5 00	310 Indianite 337..	
206 " Brown 172.....	5c. to 50	320 Indicolite 365.	
Henryrite Ap. 2-27.....	1 00 to 5 00	339 Indurated Talc	
90 Hepatic Pyrites 75.....	25c. to 50	143 Iodyrite 117...	
184 Hercynite 148.....	10c. to 1 00	287 Iolite 299.....	
504 Herderite 546.....		7 Iridosmine 12..	
883 Herschelite 437.....	50c. to 1 25	13 Iron 15.....	
835 Hessenbergite 762.....		94 " Arsenica	
58 Hessite 50.....	50c. to 5 00	721 " Carbonat	
112 Heteromorphite 91.....	25c. to 1 00	189 " Chromic	
218 Heterogenite Ap. 2-27.....		183 " Magnetic	
394 Heulandite 444.....	15c. to 1 50	13 " Meteoric	
476 Hiemite 519.....	75	180 " Micaceous	
819 Hircite 747.....		180 " Oxyd 140	
435 Hisingerite 489.....	75	180 " Specular	
499 Hislopite 463.....	1 00	721 " Spathic 6	
556 Hitchcockite 577.....	1 00	213 " Ore, Bog	
522 Hoernesite 556.....		181 " " Titan	
231 Hone Stone 194.....	5c. to 25	180 " " Jasp	
500 Hopeite 544.....		75 " Pyrites	
81 A. Horbachite, Ap. 2-28.....		94 " " Ars	
247 Hornblende 232.....	10c. to 2 00	68 " " Map	
245 " Enstatite 230, 25c.	1 50	90 " " V	
235 " Labrador 209, 25c.	5 00	181 " Spinel 14	
140 Horn Silver 114.....	10c. to 3 00	181 A. Iserite 145.	
231 Horn Stone 195.....	25c. to 50	250 A. Isoclasite A	
49 Horse-flesh Ore 45.....	15c. to 1 00	338 A. Isopyre 392	
238 Hortonite 222.....	25c. to 1 00	231 Itacolumite 19	
259 A. Hortonolite, Ap. 1-7.....	25c. to 1 00	307 Ittnerite 333..	
214 Houghite 179.....	15c. to 1 00	334 Ivaarite 391..	
744 Hovite 709.....		431 A. Ivigite Ap.	
601 Howlite 598.....	1 00	787 Ixolyte 736...	
44 A. Huascolite 42.....		363 Jacksonite 410	
611 Hübnerite 603.....	50c. to 1 00	188 A. Jacobsite A	
238 Hudsonite 216.....	25c. to 50	247 Jade, Common	
758 Humboldtine 718.....		280 A. Jadeite 232.	
319 Humite 363.....	25c. to 1 00	112 Jamesonite 90.	
531 Hureaulite 561.....	50	272 Jargon 272...	
310 C. Huronite 341.....	50	691 Jarosite 660..	
597 A. Huyssenite 793.....		231 Jasper 195.....	
420 F. Hverlera 478.....		417 Jefferisite 494.	
681 Hversalt 654.....	15c. to 75	238 Jeffersonite 21	
271 Hyacinth 270.....	25c. to 1 50	273 Jeffreynoffite 2	
232 Hyalite 199.....	25c. to 1 00	271 E. Jelletite 269	
253 A. Hyalomelan 245.....		415 Jenkinsite 470.	
259 Hyalosiderite 256.....	1 00	233 Jenzschite 201.	
313 Hyalophane 346.....	75	831 Jet 760.....	
212 Hydrargillite 177.....	10c. to 1 00	273 Jewreynovite 2	
762 Hydrid, Pentylic	720.....	705 Johannite 666.	
763 " Hexylic		449 Jollyte 492.....	
764 " Heptylic		107 Jordanite 88...	
765 " Octylic		32 Josëite 31.....	
766 " Nonylic		645 Jossait 631...	
761 " Tetrylic.....		127 A. Julainite A	
430 G. Hydroapatite 535.....		721 Junckerite 683	
Hydrobucholzite 799.....	75	674 Kalinite 652..	
596 Hydroboracite 595.....		448 Kammererite 4	
Hydrocuprite, Ap. 2-28.....		494 Kampylite 537.	
634 A. Hydrocyanite, Ap. 2-29.....		73 Kaneite 61.....	
741 Hydrodolomite 708.....	10c. to 50	419 Kaolinite 473..	
740 Hydromagnesite 707.....	10c. to 1 00	554 A. Kapnicite 5	
232 Hydrophane 199.....	50c. to 1 25	223 Karelinit 185..	
415 Hydrophite 470.....	75	632 Karstenite 621	
Hydrosiderite.....	75	420 F. Keffekillite 4	
349 A. Hydrosilicite 799.....		331 Keilhauite 37.	
399 Hydrosteatite 453.....	25	226 Kermesite 186.	
247 Hyd. Anthophyllite 242.....	25c. to 75	414 Kerolite 470...	
523 { Hydrous Bibasic Arse-}	560	447 A. Kerrite Ap.	
{ niate of Nickel & Cobalt }		712 Kerstenite 663	

Phosphate } 587	655 Kieserite 641.....	75
na & Lime }	422 Killinite 480.....	50
es 75.....	Kirwanite 800.....	50
78.....10c. to 1 00	732 Kischtimite 703.....	
roite 260.....	495 A. Kjerulfine Ap. 2-31.....	
11.....10c. to 1 00	121 A. Klaprotholite Ap. 1-8.....	75
e, Ap. 2-29.....	4 8 Klipsteinite 511.....	
209.....25c. to 1 00	263 Knebelite 260.....	
392.....	123 Kobellite 99.....	75
49.....	483 A. Kochelite, Ap. 1-8.....	
41.....	276 A. Koelbingit 284.....	
800.....	247 B. Kokcharoffite 242.....	
.....25c. to 75	238 Kokkolith 214.....10c. to	50
77.....5c. to 10 00	518 A. Kollophan, Ap. 1-9.....	
mite 415.....	271 Kolophonite 269.....5c. to 1 50	
.....50c. to 1 00	10 A. Kongsbergite, Ap. 2-32.....	
.....15	793 Könlite 737.....	
.....75	471 A. Koppite, Ap. 2-32.....	
.....25c. to 2 00	498 A. Korarfveite, Ap. 2-32.....	
, Ap. 1-7.....	179 Korund 138.....5c. to 2 00	
.....25c. to 1 00	450 Kotschubeite 497.....	2 00
.....25c. to 1 00	530 Köttigite 561.....	
.....25c. to 1 00	303 Koupholite 410.....	50
452.....5c. to 50	316 Krabite 359.....	50
.....1 00	799 A. Krantzite 741.....50c. to 1 00	
.....25c. to 50	185 Kreittonite 149.....	75
.....10c. to 1 00	149 Kremersite 119.....	75
.....25c. to 10 00	378 Krokallite 426.....	50
78.....10c. to 1 00	249 Kropidolite 243.....	1 25
e 688.....	164 Kryolith 126.....5c. to 1 50	
153.....5c. to 50	501 Kuhnite 544.....	1 00
149.....5c. to 5 00	12 Kupfer 14.....5c. to 5 00	
15.....25c. to 10 00	127 Kupfer Blende 104.....50c. to 1 00	
ns 140.....5c. to 1 00	71 Kupfernickel 60.....25c. to 1 00	
.....5c. to 5 00	245 Kupfferite 230.....	
140.....5c. to 50	324 Kyanite 375.....10c. to 1 75	
388.....5c. to 5 00	90 Kyrosite 76.....	
178.....	311 Labradorite 341.....25c. to 2 00	
ic 143.....5c. to 1 00	605 Lagonite 600.....	
ery 141.....10c. to 50	697 Lamprophanite 663.....	
62.....5c. to 2 00	641 Lanarkite 628.....	1 00
enical 78 10c. to 1 00	740 Lancasterite 707.....25c. to 1 00	
netic 58.25c. to 50	702 Langite 665.....	75
White 75, 25c. to 1 00	745 Lanthanite 709.....	1 00
.....10c. to 1 00	306 Lapis Lazuli 331.....10c. to 5 00	
.....15c. to 50	604 Larderelite 699.....	50
p. 1-7.....	343 Laumontite 399.....5c. to 1 00	
.....25c. to 1 00	89 Laurite 74.....	
5.....25c. to 1 00	238 Lava 220.....5c. to 1 00	
.....	526 B. Lavendulan 560.....	
.....	644 A. Laxmannite Ap. 1-9.....	
1-7.....1 00	316 Lazurfelspar 356.....25c. to 5 00	
.....25c. to 1 00	551 Lazulite 572.....15c. to 2 50	
p. 1-8.....25c. to 1 00	15 Lead 17.....1 00 to 3 00	
233.....25c. to 1 00	44 " Argentiferous 41.....10c. to 2 00	
.....50c. to 2 00	25 " Black 44.....5c. to 1 00	
.....25c. to 1 00	729 " Carbonate 700.....10c. to 2 00	
.....75	642 " Chromate 628.....25c. to 5 00	
.....1 25	617 " Molybdate 607.....25c. to 5 00	
.....5c. to 1 00	493 " Phosphate 535.....25c. to 1 00	
.....5c. to 1 00	633 " Sulphate 622.....25c. to 5 00	
.....15c. to 1 00	621 " Vanadate 610.....75c. to 1 50	
.....50	635 Leadhillite 624.....	1 00
.....75	607 Leather, Mountain 134.....10c. to 1 00	
.....25c. to 1 50	57 Leberblende 50.....	75
.....15c. to 1 00	652 Lecontite 635.....	
.....1 50	Leedsite 800.....	
.....1 00 to 3 00	316 Leelite 353.....15c. to 50	
.....1 00 to 15 00	47 Lehrbachite 44.....	75
.....1 00 to 3 00	378 Lehuntite 426.....	50
.....	316 Lennilite 356.....25c. to 1 00	
p. 1-8.....	343 A. Leonhardite 401.....50c. to 1 00	
.....50	204 Lepidokrokite 163.....15c. to 1 00	
.....25c. to 1 00	294 Lepidolite 314.....5c. to 1 50	
.....75	290 Lepidomelane 307.....50c. to 1 00	
.....1 00	Lesleyite 800.....15c. to 1 00	
.....25c. to 1 00	703 Lettsomite 666.....1 50 to 3 00	
.....25c. to 75	691 Leucanterite 680.....	50
.....75	451 Leuchtenbergite 500.....	1 50
.....15c. to 50	309 Leucite 334.....10c. to 1 00	
.....	806 Leucopetrite 743.....	
.....25c. to 75	264 Leucophanite 263.....	75
.....	91 Leucopyrite 76.....15c. to 1 00	
.....1 00	382 Levynite 431.....	75
.....25c. to 1 00	535 Libethenite 563.....	75
.....15c. to 50	422 Liebenerite 479.....50c. to 1 00	
.....	754 Liebigite 717.....	1 25
2-31.....	284 Lievrite 296.....25c. to 1 00	
.....	118 Light Red Silver 96.....50c. to 4 50	
.....	831 Lignite 755.....5c. to 50	

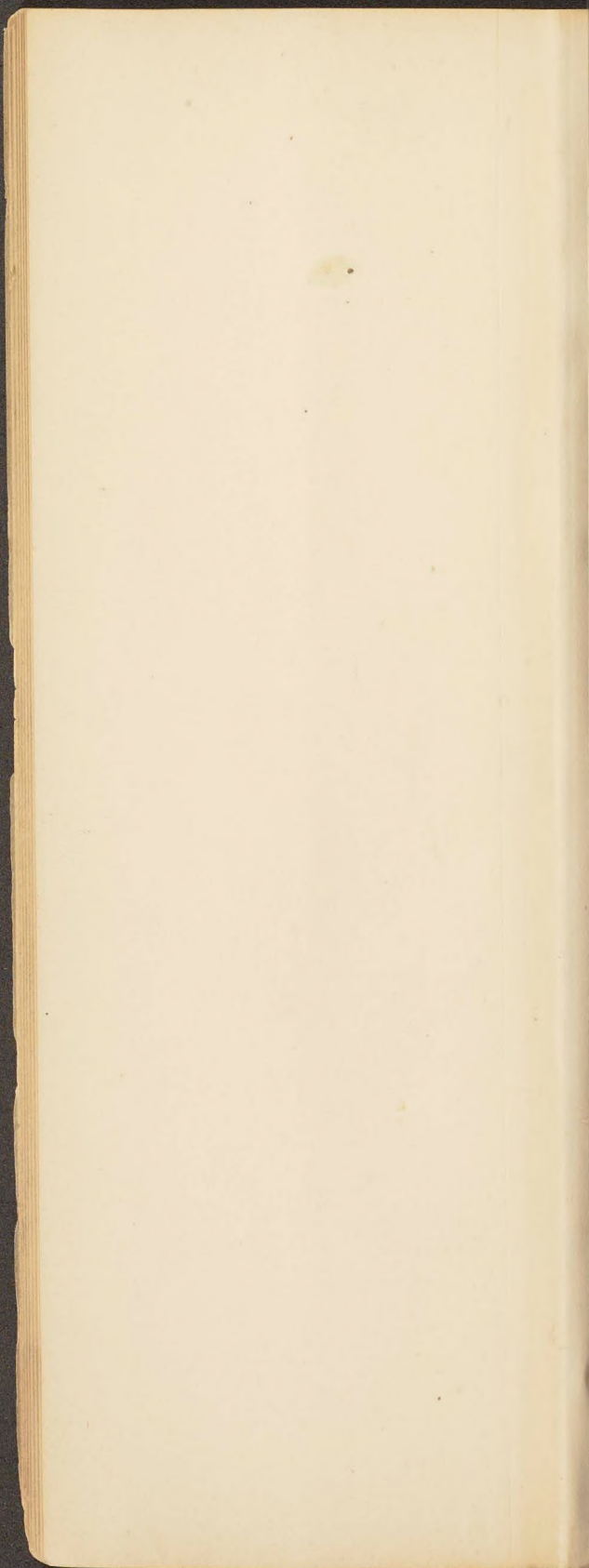


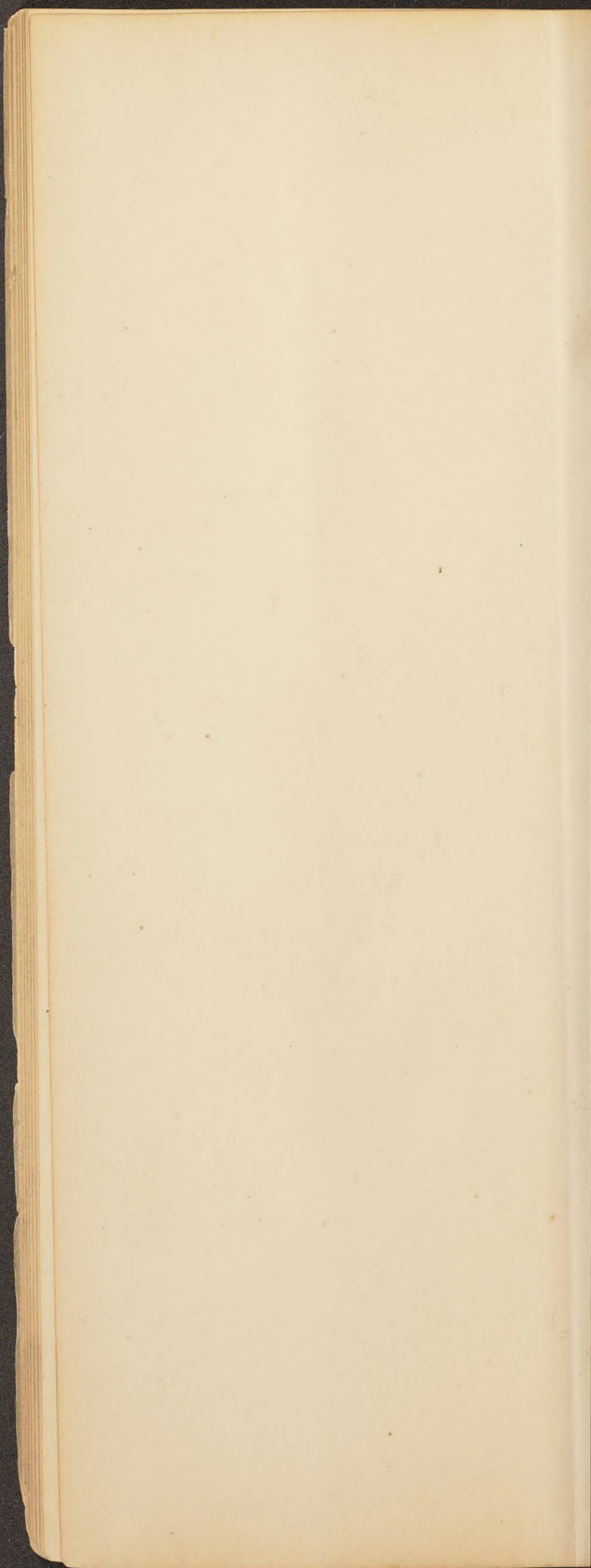


443 Lillite 493.....		707 Medjидite 667.....	
414 A. Limbachite Ap. 2-34.....		Meerschalluminite	
715 Lime Carbonate 670.....5c. to 3 00		402 Meerschallum 456.....	
751 B. " Malachite 715.....	50	613 Megabasite 604.....	
715 Limestone 620.....5c. to 50		297 Meionite 318.....	
213 Limnite 178.....	25	178 Melaconite 136.....	
206 Limonite 172.....5c. to 1 00		498 E. Melanchlore 54.....	
700 Linarite 663.....15c. to 1 50		827 Melanellite 750.....	
583 Lindackerite 590.....	1 00	830 Melanasphalt 733.....	
81 Linnaeite 68.....15c. to 2 00		811 Melanchyme 744.....	
310 Linseite 340.....	75	425 Melanhydrite 483.....	
542 Liroconite 567.....	1 00	271 E. Melanite 267.....	
254 Lithia Mica 314.....5c. to 1 50		435 Melanolite 490.....	
320 " Tourmaline 367, 10c. to 10 00		664 Melanterite 646.....	
218 D. Lithiophorite Ap. 1-9.....		274 Melilite 280.....	
715 Lithographic Stone 679.....10c. to 1 00		420 B. Melinite 477.....	
406 Lithomarge 460.....10c. to 50		268 Melinophane 263.....	
29 A. Livingstonite Ap. 2-35.....		268 Meliphanite 263.....	
186 Lodestone 149.....10c. to 5 00		823 Mellite 750.....	
93 Lölingite 77.....		100 A. Melonite 801.....	
90 Lonchidite 76.....	50	420 G. Melopsite 478.....	
670 Löweite 643.....	75	181 Menaccanite 143.....	
690 Löwigite 659.....	1 00	151 Mendipite 120.....	
316 Loxoclose 312.....15c. to 50		677 Mendozite 653.....	
595 A. Ludwigite Ap. 2-35.....50c. to 2 00		123 Meneghinite 105.....	
715 Lumachelle 679.....50c. to 2 00		485 Menzite 525.....	
598 A. Lüneburgite Ap. 1-10.....		232 Minilite 199.....	
132 Luzonite Ap. 2-35.....		8 Mercury 8.....	
231 Lydian-stone 195.....10c. to 50		64 " Sulphide.....	
447 B. Maconite Ap. 2-36.....		289 Merroxene 307.....	
322 Macle 371.....10c. to 50		719 Mesitite 687.....	
715 Madrepore Marble 679.....25c. to 1 00		381 Mesotype 430.....	
155 Magnesias Chlorid 122.....		381 Mesolite 430.....	
271 " Garnet 267.....25c. to 75		519 Metabrushite 553.....	
597 " Borate 595.....25c. to 1 50		455 Metachlorite 503.....	
210 " Hydrate 175.....5c. to 5 00		61 A. Metacinnabarite.....	
740 " Hydrocarbonate 707.....	25	13 Meteoric Iron 15.....	
187 Magnesioferrite 152.....50c. to 1 50		13 Meteorite 15.....	
718 Magnesite 685.....10c. to 50		225 A. Meymacite Ap.....	
186 Magnet, Native 149.....10c. to 5 00		108 Miargyrite 88.....	
68 Magnetic Pyrites 58.....25c. to 50		293 Mica 309.....	
186 Magnetite 149.....10c. to 5 00		294 Mica-lithia 314.....	
189 Magnochromite Ap. 2-36.....		25 Mica pictoria 24.....	
187 Magnoferrite 152.....	75	293 " picture 309.....	
751 Malachite 713.....10c. to 5 00		34 Mica schist 359.....	
751 B. " Lime 715.....	50	293 " star 309.....	
752 " Blue 715.....15c. to 5 00		279 B. Michaelsonite 2.....	
272 A. Malacon 275.....50c. to 1 50		316 Microcline 355.....	
211 D. Maldonite Ap. 1-10.....		472 Microcline 355.....	
Maltha 728.....	50	472 Microcline 355.....	
657 Mamanite 642.....		Microplakite Ap. 2.....	
52 Mangan Blende 46.....	1 00	Microphyllite Ap. 2.....	
277 " Epidote 285.....50c. to 1 00		305 A. Microsommitte.....	
218 A. Manganese Bog 181.....5c. to 1 00		814 Middletonite 745.....	
156 " Chlorid 122.....		232 Milkopal 199.....	
722 " Carbonate 691.....	50	Milarite Ap. 1-10.....	
190 " Gray 165.....5c. to 1 00		66 Millerite 56.....	
241 " Red 225.....5c. to 1 00		465 Miloschite 510.....	
205 Manganite 170.....25c. to 1 50		494 Mimetite 537.....	
725 Manganocalcite 697.....	75	831 Mineral coal 753.....	
290 A. Manganophyllite Ap. 2-37.....		197 Minium 163.....	
715 Marble 670.....5c. to 1 00		653 Mirabilite 636.....	
715 " Breccia 678.....10c. to 50		Miriqidite Ap. 2.....	
715 " Carrara 678.....5c. to 50		628 Misenite 615.....	
715 " Encrinal 678.....15c. to 1 00		94 Mispickel 78.....	
715 " Landscape 678.....50c. to 3 00		683 Misy 655.....	
715 " Madrepore 679.....25c. to 1 00		301 Mizzonite 325.....	
715 " Parian 678.....15c. to 1 00		231 Mocha stone 195.....	
715 " Ruin 678.....25c. to 3 00		617 Molybdate of Lead.....	
411 " Serpentine 464.....15c. to 1 00		34 Molybdenite 32.....	
715 " Shell 678.....15c. to 1 00		224 Molybdate 185.....	
715 " Sienna 678.....10c. to 50		146 Molsite 118.....	
411 " Verd Antique 464.....25c. to 1 00		496 Monazite 539.....	
90 Marcasite 75.....15c. to 1 00		505 Monimolite 546.....	
316 Marekanite 359.....	75	356 Monradite 406.....	
459 Margarite 506.....10c. to 50		323 Monrolite 373.....	
439 Margarodite 487.....10c. to 50		711 Montanite 668.....	
303 Marialite 326.....50c. to 1 00		258 Monticellite 255.....	
Mariposite Ap. 2-37.....		406 Montmorillonite.....	
715 Marl 679.....5c. to 25		314 Moonstone 347.....	
56 Marmatite 48.....50c. to 1 00		396 Mordenite 446.....	
411 C. Marmolite 465.....10c. to 50		668 Morenosite 648.....	
654 Martinsite 641.....	50	361 A. Moresnetite 49.....	
180 A. Martite 142.....10c. to 1 50		231 Morion 196.....	
650 Mascagnite 635.....	1 00	691 Moronolite 660.....	
309 A. Maskelynite Ap. 2-37.....		492 Moroxite 530.....	
458 Masonite 504.....25c. to 1 00		724 Mossottite 691.....	
177 Massicot 136.....		283 Mosandrite 295.....	
150 Matlockite 119.....2 00 to 10 00		247 Mountain cork 24.....	
635 A. Maxite Ap. 2-38.....		232 Mullers Glass 19.....	
		524 Mullicite 556.....	

TS' AGENCY CATALOGUE.

te Ap. 2-38.....	75 Mundie 62.....5c. to 2 00
6.....25c. to 1 00	279 Muromontite 289.....
.....15c. to 1 00	293 Muscovite 309.....10c. to 2 00
.....10c. to 1 00	238 Mussite 214, 702.....25c. to 1 00
543.....1 25	751 A. Mysorin 715.....
.....	293 Nacrite 309, 473.....15c. to 50
.....	510 Nadorite Ap. 1-11.....1 00 to 2 00
.....	Naesumite Ap. 1-11.....
3.....50	99 Nagyagite 82.....50c. to 3 00
4.....25c. to 50	715 Nailhead Spar 670.....10c. to 3 00
3.....50	214 A. Namaqualite Ap. 1-11.....
.....10c. to 1 25	146 A. Nantokite Ap. 1-11.....
.....50	768 Naphtha 723.....10c. to 50
.....	794 Naphthalin 738.....
.....25c. to 1 00	378 Natrolite 426.....15c. to 2 00
.....	736 Natron 705.....50
3.....75	41 Naumannite 39.....
.....	316 Necronite 352.....50
.....25c. to 1 00	124 Needle ore 100.....50c. to 1 00
.....	781 B. Neft-gil 734.....
.....50	404 E. Nefedieffite Ap. 2-41.....
.....10c. to 2 00	210 Nematite 175.....15c. to 50
.....50c. to 2 00	553 Neotese 574.....50
.....	357 Neolite 406.....75
.....50c. to 5 00	437 Neotocite 491.....75
.....	304 Nephelite 327.....50
.....25c. to 75	Nephrite 801.....15c. to 50
.....25c. to 75	420 Nertschinskite 476.....50
55.....10c. to 5 00	423 A. Neurolite 482.....
.....75	71 Niccolite 60.....25c. to 1 00
.....	Nickel Ap. 2-41.....
.....25c. to 1 00	72 Nickel Antimony 61.....50c. to 1 00
.....25c. to 1 00	508 Nickel Arsenate 548.....
3.....1 00	509 " " 548.....
.....50c. to 1 00	71 Nickel, copper 60.....25c. to 1 50
ite Ap. 1-10 1 00	747 Nickel, Emerald 710.....25c. to 1 00
.....25c. to 10 00	416 Nickel Gymnite 471.....25c. to 1 00
.....10 00	54 Nickel Pyrite 47.....50
p. 2-38.....	54 Nicopyrite 47.....50
.....1 00 to 5 00	247 G. Nigrescite Ap. 1-12.....
.....5c. to 1 00	193 Nigrin 159.....5c. to 10 00
.....10c. to 2 00	590 Nitre 592.....25c. to 1 00
.....5c. to 50	591 Nitratine 592.....50
.....5c. to 25	592 Nitrocalcite 593.....75
.....5c. to 50	Nitroglauberite Ap. 2-41.....
.....10c. to 50	593 Nitromagnesite 593.....
289.....	478 A. Nohlite Ap. 2-41.....
.....50c. to 1 25	247 Noralite 236.....
.....1 00	247 Nordenskioldite 233.....75
2-39.....	308 Nosite 333.....25c. to 1 00
p. 2-39.....	231 Novaculite 193.....5c. to 25
Ap. 2-39.....	493 Nussierite 535.....
.....	219 Nuttallite 319.....50c. to 1 00
.....25c. to 1 00	316 Obsidian 359.....15c. to 75
.....	180 Ochery Iron Ore 140.....15c. to 50
.....10c. to 5 00	224 Ochre Molybdic 185.....25c. to 1 50
.....	180 " Red 140.....5c. to 15
.....10c. to 1 55	" Uranium?.....50c. to 1 50
.....5c. to 50	420 C. Ochran 477.....50
.....25c. to 75	194 Octahedrite 161.....50c. to 5 00
2-40.....	172 Octahedral Copper Ore 133.....5c. 1 00
.....	186 " Iron Ore 149.....5c. 1 00
.....10c. to 1 00	433 Oellacherite 489.....75
.....75	272 D. Oerstedite 275.....75
.....25c. to 1 00	768 Oil, Genesee or Seneca 725 10
.....10c. to 1 50	194 Oisanite 161.....50c. to 5 00
ad 607.....25c. to 5 00	341 Okenite 398.....
.....10c. to 1 00	56 A. Oldhamite Ap. 2-42.....
.....25c. to 1 50	180 Oligiste Iron 140.....25c. to 1 00
.....	314 Oligoclase 346.....25c. to 1 00
.....25c. to 1 50	536 Olivenite 564.....50c. to 1 00
.....1 09	259 Olivine 257.....25c. to 1 00
.....	411 Ollaris 464.....5c. to 1 00
.....	238 A. Omphacite 223.....50
.....	204 Onegite 109.....50
.....	422 Oncosine 480.....1 00
.....50c. to 1 00	65 A. Onofrite 56.....75
450.....25c. to 1 00	231 Onyx 195, 680.....15c. to 1 00
352.....10c. to 1 00	715 Oolite 679.....5c. to 50
.....	215 " Iron Stone 172.....5c. to 1 00
.....1 00	422 Oosite 480.....75
409.....75	Opacite Ap. 2-42.....
.....5c. to 25 00	232 Opal 198.....10c. to 10 00
.....50	232 " Fire 198.....10c. to 10 00
.....25c. to 1 00	232 " Jasper 199.....25c. to 75
.....25c. to 75	232 " Precious 198.....10c. to 10 00
.....50c. to 1 50	232 " semi 199.....10c. to 50
234.....25c. to 1 00	235 " cut 198.....50c. to 3 00
99.....25c. to 1 00	232 " Wood 199.....10c. to 1 00
.....15c. to 3 00	231 Opalized Wood 196.....10c. to 1 00

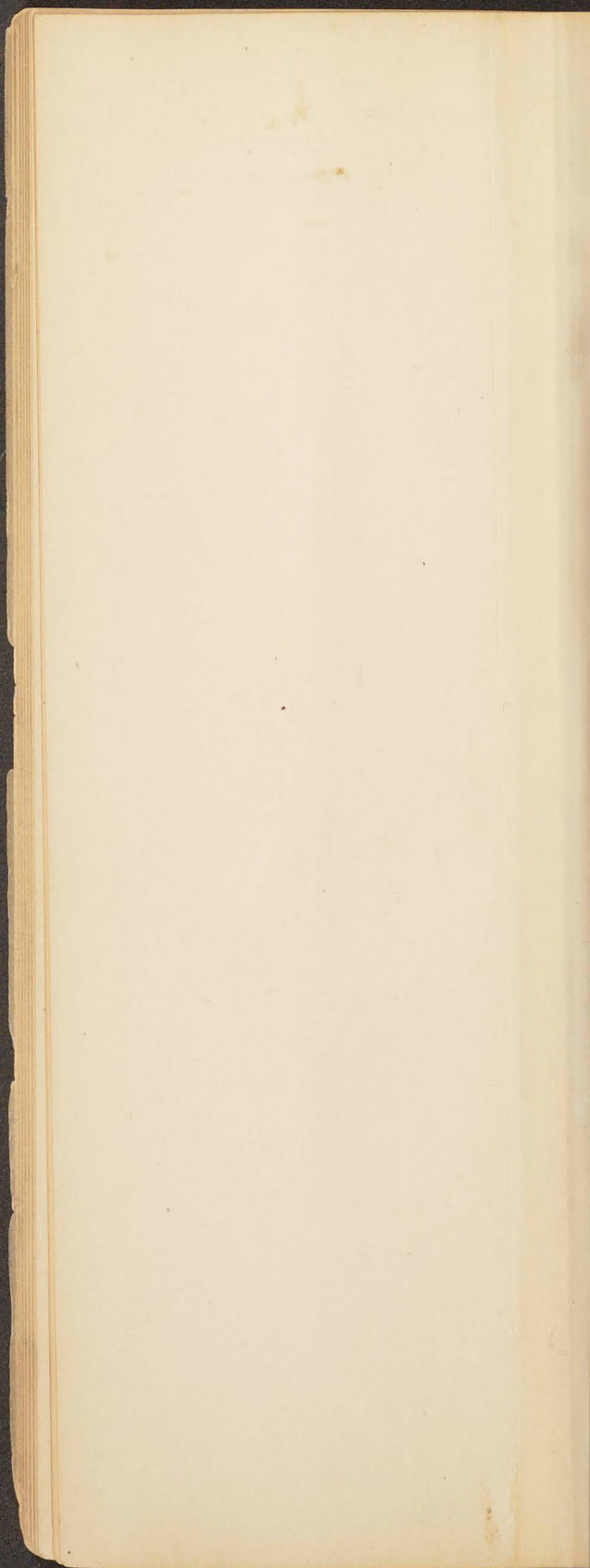


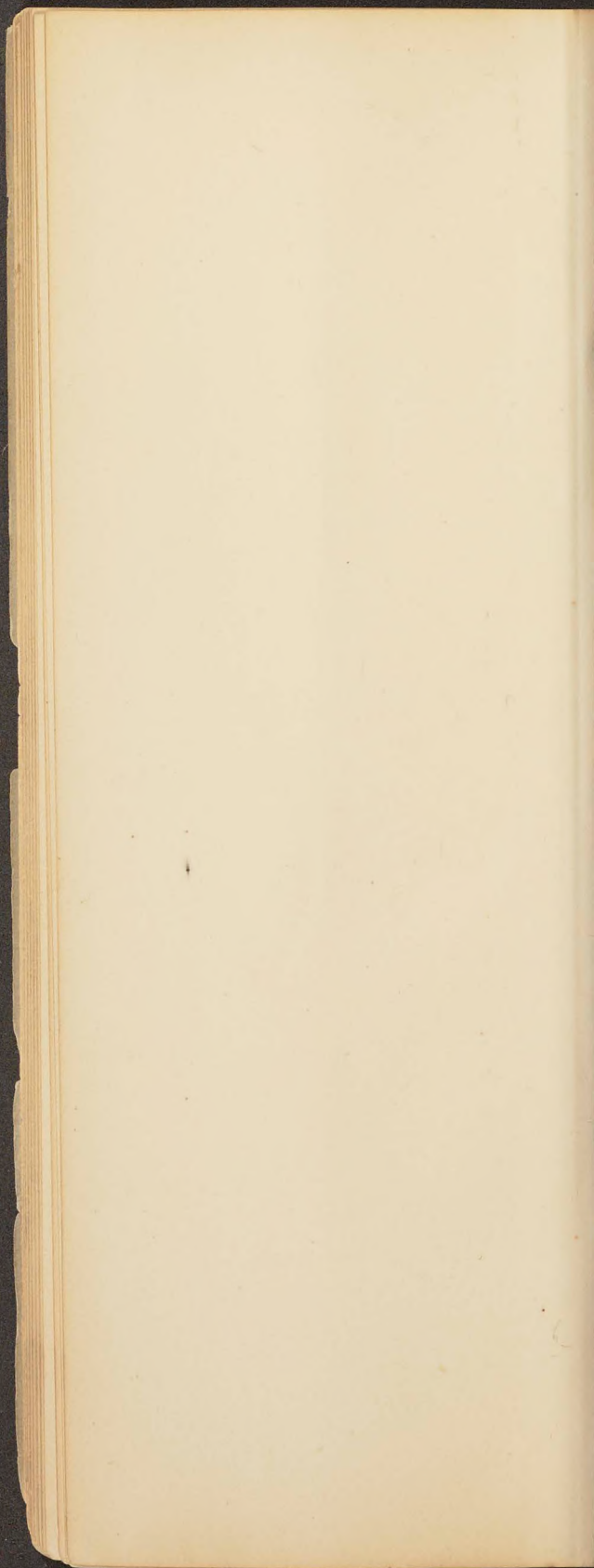


PRICE LIST OF SPECIES A

468	Opsimose 511.....	\$ 50	458	A. Phyllite 50
1	Or Native 3.....	25c. to 10 00	325	Physalite 377
365	Orangite 413.....	50c. to 5 00	830	C. Piauzite 753
420	D. Oravitzite 477.....	75	678	Pickeringite 6
119	Ore Antimony 96.....	50	383	Picranalcime 6
	Orileyite Ap. 1-12.....		470	A. Picrofluite
27	Orpiment 27.....	25c. to 1 00	411	Picrolite 465
278	Orthite 285.....	10c. to 1 50	658	Picromerite 6
316	Orthoclase 352.....	5c. to 75 00	520	A. Picropharm
316	" Green 352.....	5c. to 75 00	352	Picrophyll 406
	" Pink.....	50c. to 10 00	377	Picrothompson
	Osbornite Ap. 1-12.....		349	Picrosmine 40
7	Osmiridium 12.....	10c. to 2 50	146	A. Piddington
490	A. Osteolite 533.....	25c. to 1 00	277	Piedmontite 2
272	Ostranite 273.....	75	829	Pigotite 750
458	A. Ottrelite 506.....	10c. to 1 00	401	Pihlile 455
269	Ouvarovite 270.....	2 00 to 10 00	460	Pimelite 510
460	Owenite 507.....	50	422	Pinite 479
192	Oxide of Tin 157.....	10c. to 1 25		Pipestone 793
221	" Antimony 184.....	25c. to 1 50	665	Pisanite 646
219	" Arsenic 183.....	1 00	715	Pisolite 679
222	" Bismuth 185.....	1 00	694	Pissophanite
172	" Copper, Red 133.....	5c. to 1 50	276	Pistacite 281
178	" " Black 136.....	10c. 1 00	720	Pistomesite 68
189	" Iron, Red 140.....	5c. to 1 00	830	Pitch, Mineral
377	Ozarkite 424; 329.....	10c. to 1 00	190	Pitchblende 1
780	Ozocerite 732.....	25c. to 1 00	316	Pitchstone 359
168	Pachnolite 129.....	25 to 2 00	354	Pitkarandite 4
96	Pacite 81.....		830	Pitaspalt 75
422	Pagodite 479.....	10c. to 20	581	Pitticite 583
241	Paisbergite 225.....	75		Plagioclase 80
425	Palagonite 483.....	75	109	Plagionite 89
3.8	Paligorskite 406.....		554	B. Planerite 5
5	Palladium, Native 12.....		231	Plasma 194
	Paraffin 730.....		654	Plaster Stone
431	Paragonite 487.....	50	3	Platinum 10
693	Paraluminite 661.....		4	Platiniridium
181	Paracolumbite 143.....		201	Plattnerite 1
298	Paranthine 318.....	50	340	A. Plombierite
836	Parathorite 763.....	1 00	25	Plumbago 24
247	Pargasite 235.....	10c. to 50	556	Plumbozumi
654	Paris, Plaster of 639.....	10c. to 1 00	112	Plumosite 91
731	Parisite 702.....	3 00	199	Polianite 163
251	Partschinite 293.....		256	Pollucite 249
223	Partzite 188.....	25c. to 1 50	40	C. Polyargyrite
684	A. Pastreite 656.....	50	131	Polybasite 107
618	Pateraite 608.....	75	426	Polychroite 48
	Pattersonite Ap. 1-18.....		656	Polyhalite 641
235	Paulite 209.....	1 00	442	Polyhydrite 4
715	Pea Stone 679.....	15c. to 25	481	Polykras 523
716	Pearl spar 682.....	10c. to 1 50	238	Polylite 216
316	Pearlstone 359.....	10c. to 50	482	Polymignite 5
831	Peat 758.....	5c. to 25	493	Polysphaerite
339	Pectolite 396.....	15c. to 3 00	126	Polytelite 104
561	Peganite 582.....	5c. to 2 00	231	Porcelain, Jap
316	Pele's Hair 360.....	10c. to 25	316	Porphyry 357
743	Pencatite 708.....	75	494	D. Portite 458
418	Penninite 495.....	15c. to 1 00	399	Potstone 451
741	Pennite 708.....	25	231	Prase 194
54	Pentlandite 47.....	50	543	Prasin 563
154	Percylite 122.....		232	Precious Opal
259	Peridot 256.....	25c. to 75	743	Predazzite 76
173	Periclasite 134.....	75	363	Prehnite 410
315	Periclone 349.....	25c. to 1 00	715	Preunnerite 6
315	Peristerite 349.....	10c. to 3 00	600	A. Priceite Ap
182	Perofskite 146.....	5c. to 5 00	452	Prochlorite 50
316	Perthite 356.....	15c. to 1 00	171	Prosopite 130
244	Petalite 229.....	10c. to 1 00	118	Proustite 9
231	Petrified Wood 193.....	5c. to 1 00	543	Pseudomalach
767	Petroleum 723.....	15c. to 1 00		Pseudomorphs
646	Pettkoite 631.....		217	Psilomelane 1
58	A. Petzite 51.....	25c. to 5 00	624	Pucherite Ap.
234	Phaestine 209.....	50	316	Pumice 359
386	Phacolite 435.....	50c. to 1 00	325	Pyonite 376
520	Pharmacolite 554.....	25c. to 1 00	351	Pyralloite 40
558	Pharmacosiderite 578.....	50	426	Pyrrargillite 4
267	Phenacite 263.....	1 00 to 10 00	117	Pyrrargyrite 9
389	Phillipsite 438.....	25c. to 1 00	75	Pyrite 62
288	Phlogopite 302.....	10c. to 50	94	" arsenic
643	Phoenikochroite 630.....		78	" copper
418	Pholerite 472.....	75	215	Pyroanrite 179
316	Phonolite 359.....	25	471	Pyrochlore 51
733	Phosgenite 703.....	25c. to 3 00	211	Pyrochroite 17
524	Phosphate of Iron 556.....	15c. to 3 00	199	Pyrolusite 16
493	" Lead 535.....	15c. to 5 00		Pyromelane 80
543	Phosphochalcite 568.....	50	493	Pyromorphite
	Phosphorchromite Ap. 1-12.....		269	Pyrope 267
492	Phosphorite 530.....	50	490	Pyrophyllite 4
241	B. Phhotizite 227.....	50	325	Pyrophysalite
231	Phthanyte 195.....	75	278	Pyrothite 28

6.....10c. to \$10 00	781 C. Pyropissite 734.....25c. to \$ 75
.....75	809 Pyroretinite 744.....
.....75	445 Pyrosclerite 493.....75
53.....50	369 Pyrosmalite 414.....1 00 to 15 00
433.....75	115 Pyrostilpnite 93.....5 00 to 25 00
512.....	238 Pyroxene 212.....5c. to 1 50
.....5c. to 1 00	837 Pyrrhite 763.....1 00
42.....10c. to 1 50	68 Pyrrhotite 58.....25c. to 1 00
nacolite 554.....	231 Quartz 189.....5 to 150 00
.....75	231 " Amethystine 189, 5c. to 50 00
nite 426.....1 00	" Aventurine 193, 25c. to 1 00
.....75	" Capped 189.....25c. to 5 00
ite 232.....	" Green 189.....5c. to 50 00
85.....15c. to 1 00	" Milky 189.....5c. to 15
.....	" Rose 189.....5c. to 2 00
.....50	" Smoky 189.....5c. to 50 00
.....75	" Cellular 189.....25c. to 1 00
.....25c. to 1 00	" Fibrous 189.....25c. to 1 00
.....10c. to 50	" Greasy 189.....5c. to 25
.....75	" Hacked 189.....5c. to 50
.....5c. to 25	" Black 189.....5c. to 50 00
661.....75	" Ferruginous 193, 5c. to 50
.....25c. to 1 00	" Granular 195.....5c. to 25
.....50	" Swimming 189.....25c. to 75
1 751.....5c. to 25	231 Quartzite 189.....5c. to 25
54.....25c. to 2 00	350 Quincite 406.....
.....15c. to 25	8 Quicksilver, Native 13.....25c. to 75
406.....75	218 E. Raddionite Ap. 1-13.....
1.....10c. to 50	90 Radiated pyrites 75.....25
.....	247 Raptulite 233.....50
2.....	684 Raimondite 656.....
.....75	63 Ralstonite Ap. 1-13.....1 00 to 3 00
76.....	92 Rammelsbergite 77.....75
.....25c. to 75	377 A. Rauite Ap. 2-47.....
639.....5c. to 1 00	428 Rastolite 486.....50
.....10c. to 5 00	339 Ratholite 396.....25c. to 1 00
11.....	26 Rauschgelb 26.....25c. to 2 00
7.....	231 Rauch quartz 189.....5c. to 50 00
e 802.....	406 A. Razoumoffskin 463.....75
.....5c. to 2 00	26 Realgar 26.....25c. to 2 00
ite 577.....1 00	226 Red Antimony 186.....25c. to 1 25
.....25c. to 1 00	180 " Chalk 141.....5c. to 25
.....50c. to 1 00	526 " Cobalt 558.....10c. to 5 00
.....2 00	172 " Copper Ore 133.....5c. to 50
e Ap. 1-12.....	180 " Hematite 140.....5c. to 5 00
.....1 00 to 5 00	180 " Iron Ore 140.....5c. to 5 00
5.....50	231 " Jasper 195.....5c. to 2 00
.....25c. to 1 00	642 " Lead Ore 628.....25c. to 1 00
93.....	180 " Ochre 141.....5c. to 25
.....75	117 " Silver Ore 94.....1 00 to 5 00
.....50	176 " Zinc Ore 135.....5c. to 3 00
23.....35c. to 1 00	61 Redruthite 52.....25c. to 1 50
535.....50	715 Refracting Spar, Double 677.....
.....50	10c. to 10 00
per 195.....5c. to 50	412 A. Refdanskite 803.....
.....10c. to 1 00	303 A. Reissite Ap. 1-14.....75
.....	748 Remingtonite 711.....
.....15c. to 50	399 Rensselaerite 451.....25c. to 50
.....25c. to 1 00	346 A. Resanite Ap. 2-48.....
.....1 00	232 Resin Opal 198.....10c. to 1 00
198.....10c. to 5 00	798 " Mineral 729.....50
.....50	411 Retinalite 464.....25
.....15c. to 3 00	825 Retinellite 748.....25
77.....75	810 Reussinite 744.....25c. to 50
p. 2-45.....10c. to 2 00	577 Rhagite Ap. 2-48.....
1.....10c. to 1 00	598 Rhodizite 596.....
.....75	448 Rhodochrome 495.....5c. to 50
.....50c. to 10 00	722 Rhodochrosite 691.....5c. to 1 00
it 568.....50c. to 1 50	241 Rhodonite 225.....5c. to 1 00
.....5c. to 10 00	448 Rhodophyllite 495.....15c. to 1 50
80.....5c. to 50	716 Rhomb spar 682.....5c. to 1 00
12.....25c. to 2 00	316 Rhyacolite 352.....25c. to 50
.....5c. to 25	231 Ribbon Jasper 195.....5c. to 75
.....15c. to 1 00	Richmondite 803.....
3.....	247 Richterite 234.....25c. to 1 00
5.....50c. to 4 50	450 Ripidolite 497.....15c. to 1 50
.....50c. to 5 00	116 Rittingerite 94.....2 00
.....5c. to 2 00	507 A. Rivotite, Ap. 2-43.....
al 78.....10c. to 1 00	811 Rochlederite 744.....
65.....5c. to 2 00	247 Rock Cork 234.....25c. to 1 00
.....	231 " Crystal 193.....5c. to 150 00
2.....50c. to 1 50	654 " Gypsum 638.....5c. to 1 00
7.....75	138 " Salt 112.....10c. to 1 00
.....5	682 Roemerite 655.....1 00
3.....	261 A. Roepperite, Ap. 1-13.....25c. to 5 00
535.....10c. to 3 00	523 Roesslerite 556.....
.....5c. to 50	506 Romeite 547.....1 00
54.....15c. to 50	231 Rose Quartz 193.....5c. to 2 00
376.....25	526 A. Roselite 560.....\$2 50 to 10 00
.....10c. to 1 50	101 Rosite 85.....50

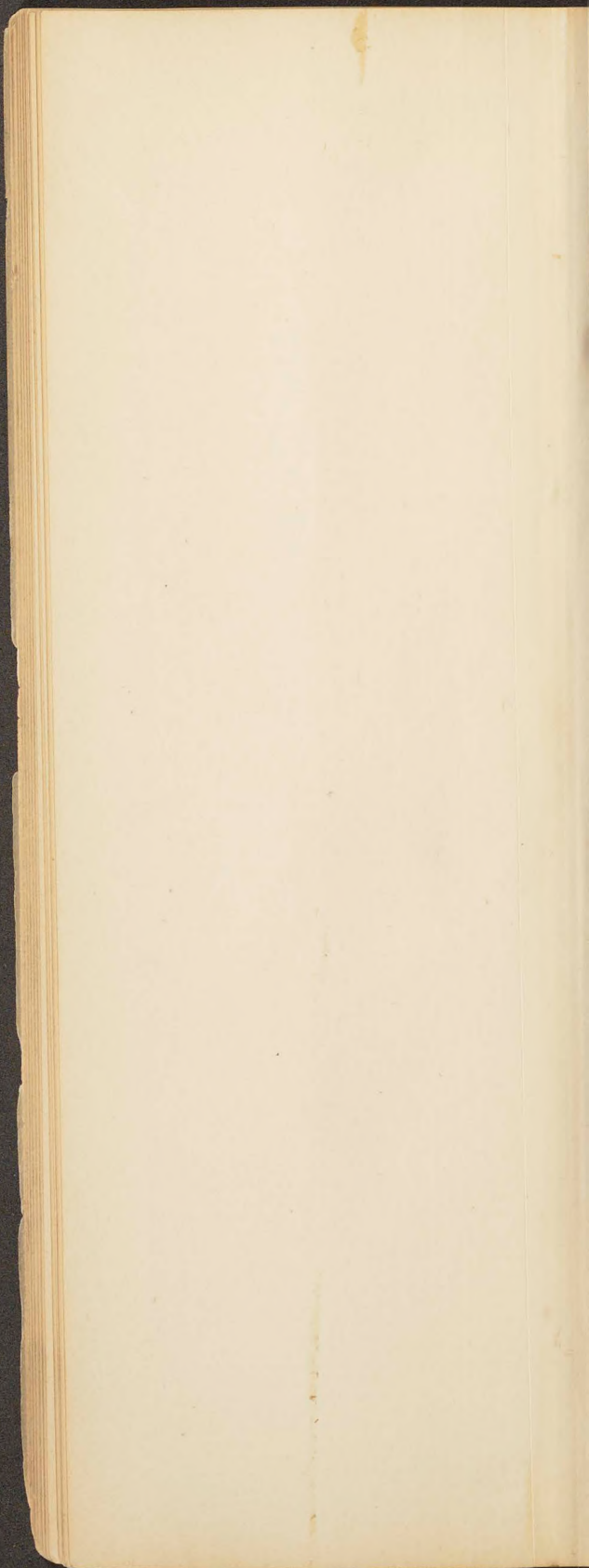


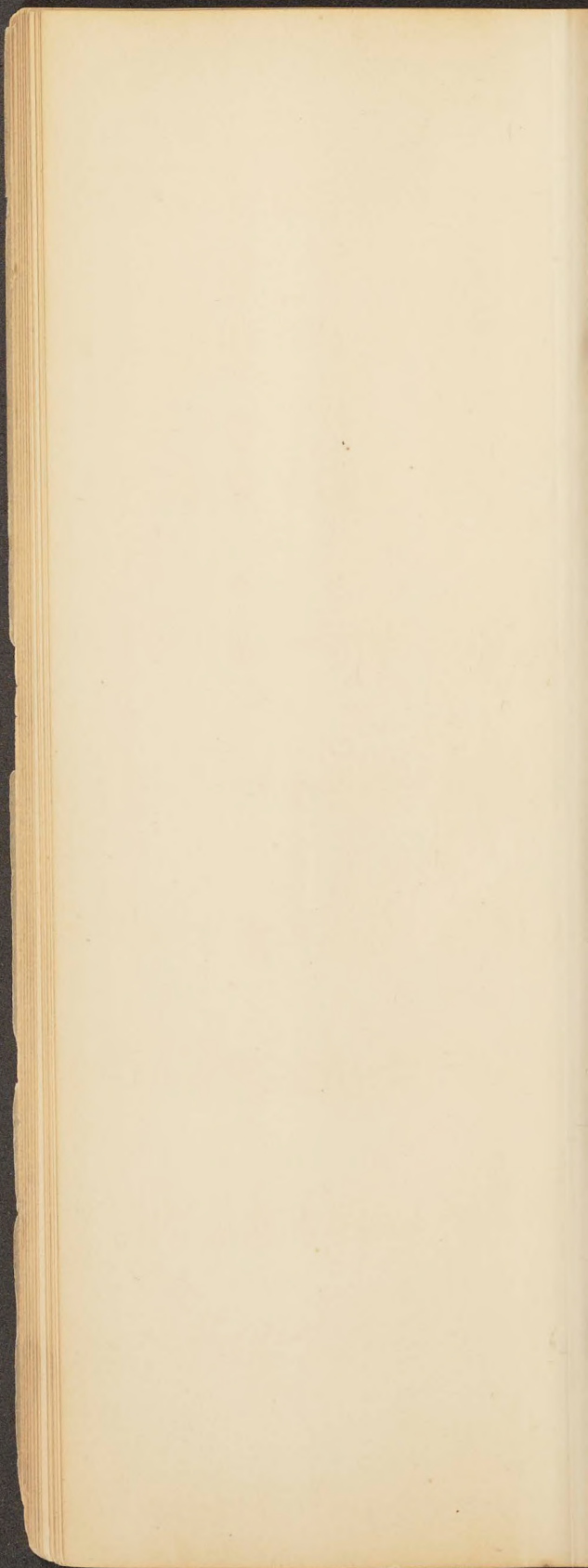


807 A. Rosthornite, Ap. 1-14.....\$	81 Siegenite 68, 69
416 Röttisite 471.....75c. to 1 50	231 Silix 189.....
289 Rubellan 304.....25c. to 75	Silicate of Yttr
320 Rubellite 365.....10c. to 1 50	361 " Zinc 40
56 Ruby Color'd Blende 48.....15c. to 1 50	231 Silicified Wood
183 " Spinel, 147.....15c. to 1 00	231 " Shell
183 " Oriental 138.....25c. to 2 00	232 Silicious Sinter
117 " Blende 94.....3 00 to 15 00	311 Silicite 341.....
118 " Silver 94, 96.....50c. to 15 00	223 Sillimanite 373.
486 Rutherfordite 526.....	2 Silver 9.....
193 Rutile 159.....5c. to 10 00	35 " Antimon
193 " Eisen Rose 159.....75c. to 2 00	" Arsenica
316 Ryacolite 352.....35	130 " Brittle 1
312 Saccharite 344.....25c. to 1 00	140 " Chloride
715 Saccharoidal Limestone 678 25	141 " Chlorbro
231 Sagenite 193.....50c. to 1 50	40 " Glance 3
238 Sahlite 215.....15c. to 1 00	140 " Horn 114
139 Sal ammoniac 114.....50c. to 1 50	117 " Red, or R
138 Salt Common 112.....10c. to 1 00	659 A. Simonyite, A
661 " Epsom 643.....10c. to 50	420 A. Sinopite 477.
653 " Glaubers 636.....25c. to 1 00	458 Sismondite 504.
590 Saltpetre 592.....50	307 Skolopsite 333.
591 " Chili 532.....5c. to 25	84 Skutterudite 71
829 A. Salts of Iron 750.....	715 Slate Spar 678.....
478 Samarskite 520.....10c. to 5 00	Slickensides.....
421 Samoite 478.....75	397 Sloanite 446.....
231 Sandstone 195.....5c. to 25	551 Smalt Naturali
316 Sanidin 355.....50	83 Smaltite 70.....
417 Saponite 472.....15c. to 50	254 Smaragd 245.....
179 Sapphire 138.....5c. to 1 50	247 Smaragdite 235
320 " Brazilian 367.....1 00	153 Smaragdocalcit
231 " Quartz 193.....10c. to 1 00	405 Smectite 458.....
335 Sapphirine 391.....50c. to 1 00	419 Smelite 473.....
196 Sarcolite 317.....5c. to 1 00	723 Smithsonite 692
231 Sard 194.....15c. to 1 00	231 Smoky Quartz
231 Sardonyx 195.....15c. to 1 00	235 A. Snarumite 3
105 Sartorite 87.....3 00	417 Soapstone 472.
398 Saspachite 447.....	599 Soda Borate 597
594 Sassolite 594.....50	736 " Carbonate
654 Satin Spar 637.....10c. to 5 00	138 " Muriate 11
280 B. Saussurite 230.....50	653 " Sulphate 6
378 Savite 426.....50	315 " Feldspar 3
376 A. Scarbroite 421.....75	591 " Nitre 592.....
299 Scapolite 319.....15c. to 1 00	305 Sodalite 330.....
614 Scheelite 605.....25c. to 2 00	133 Sodium Chlorid
722 Scheererite 727.....75	831 Soft Coal 755.....
247 C Schefferite 242.....25c. to 1 00	492 D. Sombreite 5
412 Schiller-spar 463.....15c. to 50	274 Somervillite 280
112 B. Schirmerite, Ap. 2-50.....1 50	252 Sordawalite 244
755 A. Schrockeringite, Ap. 2-50..	350 Spadaite 405.....
812 Schlanite 745.....	124 Spaniolite 101.....
343 Schneiderite 399.....50	716 Spar Brown 681
320 Schörl 365.....5c. to 1 00	715 " Calc 670.....
334 Schorlomite 393.....10c. to 1 50	632 " Cube 621.....
74 Schreibersite 61.....75	715 " Dogtooth 6
98 Schrift Tellur 81.....25c. to 5 00	715 " Double Ref
376 Schrötterite 421.....75	
152 Schwartzembergite 120.....	316 " Feld 352.....
125 Schwatzite 101.....50	631 " Fibrous 61
630 Schwerspath 616.....5c. to 5 00	159 " Fluor 123.....
66 Schwefelkies 56.....5c. to 2 00	630 " Heavy 616.....
808 Scleretinite 744.....	715 " Iceland 67
379 Scolecite 428.....25c. to 2 00	211 " Manganese
553 Scorodite 574.....25c. to 75	715 " Nailhead 6
276 Scorza 282.....50	716 " Pearl 682.....
377 Sconlerite 424.....50	654 " Satin 637.....
388 A. Seebachite Ap. 2-50.....	238 " Schiller 22
654 Selenite 637.....5c. to 1 00	237 " Tabular 21
65 Selenmercur 56.....75c. to 2 00	715 Spartaite 678.....
23 Selensulphur 21.....5c. to 1 00	176 Spartalite 133.....
163 B. Sellaite Ap. 1-14.....	83 A. Spathiopyrite
463 Selwynite 509.....	721 Spathic Iron 68
232 Semiopal 199.....10c. to 1 00	399 Speckstein 451.....
220 Senarmontite 184.....25c. to 1 50	189 Specular Iron
402 Sepiolite 456.....25c. to 1 00	271 Spessartite 268.....
430 A. Sericite 487.....25c. to 50	675 Sphaerite 587.....
411 Serpentine 464.....10c. to 1 00	721 Sphaerosiderite
411 " Fibrous 465.....15c. to 1 00	392 Sphaerostilbite
411 " Foliated 465.....15c. to 1 00	56 Sphalerite 48.....
411 " Precious 464.....50c. to 1 50	329 Sphene 383.....
783 Setting Stones Resin 735.....	216 Spherulite 359.....
420 Severite 476 and 463.....1 00	275 Sphenoclase 280
461 Seybertite 508.....5c. to 50	404 A. Sphragite 4
715 Shell Marble 679.....15c. to 1 00	183 Spinel 147.....
320 Shorl 365.....5c. to 1 00	184 " Iron 148.....
721 Siderite 688.....5c. to 3 00	183 " Ruby 14
456 A. Sideroschisolite 504.....1 00	185 " Zinc 149.....
721 Sideroplesite 688.....75	243 Spodumene 228
721 Siderose 688.....5c. to 3 00	724 Sprudelstein 569
Sieburgite Ap. 2-51.....	490 C. Staffelite 534

ST'S AGENCY CATALOGUE.

.....15c. to \$ 2 00	715 Stalactite 679.....15c. to \$1 50
.....5c. to 150 00	715 Stalagmite 679.....10c. to 1 00
ia 804.....	815 Stanekite 745.....
7.....5c. to 5 00	325 Stangenspar 370..... 50
193.....5c. to 1 00	80 Stannite 68.....25c. to 1 00
196.....15c. to 3 00	597 Stassfurthite 595.....50c. to 1 00
.....50c. to 1 00	333 Staurolite 388.....10c. to 1 00
..... 50	309 Steatite 451.....10c. to 50
.....10c. to 50	44 Steinmannite 41..... 75
.....10c. to 7 50	339 Stellite 396.....50c. to 1 00
ial 35.....	130 Stephanite 106.....50c. to 2 50
l 35..... 1 50	515 Stercorite 551.....
106.....50c. to 2 50	63 Sternbergite 54.....
114.....10c. to 1 00	228 Stetefeldtite 188.....50c. to 1 50
amide 115.....10c. 5 00	228 Stibiconite 188.....25c. to 1 50
8.....50c. to 5 00	587 A. Stibioferrite, Ap. 2-53..... 2 50
.....10c. to 2 00	29 Stibnite 29.....15c. to 5 00
uby 94, 96, 50 to 1 00	392 Stilbite 442.....5c. to 5 00
Ap. 1-14.....	407 Stilpnomelane 460..... 75
..... 1 00	204 Stilpnosiderite 170.....50c. to 1 00
..... 1 00	715 Stinkstone 677.....10c. to 1 00
..... 1 00	406 Stolpenite 459..... 1 00
..... 1 00	616 Stolzite 606.....50c. to 2 00
.....25c. to 1 50	316 Stone, Amazon 355.....5c. to 75 00
.....	306 " Armenian 331.....10c. to 3 00
he 572.....15c. to 2 50	492 " Asparagus 530.....50c. to 1 50
.....25c. to 1 00	231 " Blood 194.....5c. to 2 00
.....50c. to 2 50	271 " Cinnamon 206.....10c. to 2 50
.....15c. to 1 00	381 " Cross 371.....10c. to 1 00
121.....15c. to 2 00	715 " Gibraltar 680.....10c. to 1 00
.....25c. to 1 00	715 " Lime 679.....5c. to 25
..... 50	715 " Lithographic 679.....10c. to 1 00
2.....15c. to 1 00	231 " Lydian 195.....10c. to 1 00
188.....5c. to 50 00	231 " Mocha 195.....5c. to 1 50
16..... 75	715 " Pea 677.....15c. to 1 00
.....10c. to 50	654 " Plaster 637.....5c. to 1 00
.....5c. to 1 00	715 " Pudding 679.....5c. to 25
705.....5c. to 75	417 " So p 472.....10c. to 50
12.....10c. to 1 00	715 " Stink 677.....5c. to 50
336.....25c. to 1 00	192 " Tin 157.....5c. to 1 00
348.....10c. to 5 00	247 Strahlstein 234.....10c. to 50
.....5c. to 25	355 Strakonitzite 406.....
.....15c. to 1 00	241 Stratopelite 227..... 1 00
e 112.....10c. to 1 00	192 Stream Tin 158.....05c. to 1 25
.....5c. to 25	454 A. Strigovite, Ap. 2-53.....
35..... 75	231 Striped Jasper 195.....5c. to 1 00
.....1 00	62 Stromeyrite 54..... 2 00
.....50c. to 1 00	728 Strontianite 699.....10c. to 1 50
..... 75	631 Strontia Sulphate 619.....5c. to 3 00
.....1 00	516 Struvite 551.....25c. to 1 00
.....10c. to 1 00	438 Stübelite 492.....
.....5c. to 5 00	120 Styloypite 98.....
.....15c. to 1 00	685 Stypticite 656..... \$1 00 to 1 50
370.....10c. to 5 00	824 Succinellite 748.....
fracting 677....	799 Succinite 740.....5c. to 2 00
.....10c. to 10 00	625 Sulphatite 614.....
.....5c. to 75 00	22 Sulphur, Native 20.....5c. to 5 00
9.....5c. to 50	23 Sulphur Selenic 21.....25c. to 1 00
.....5c. to 5 00	316 Sunstone 355.....10c. to 2 00
.....5c. to 5 00	638 Susannite 626..... 1 00
7.....10c. to 10 00	595 A. Sussexite, Ap. 1-15.....25c. to 2 00
225.....5c. to 2 00	584 Svanbergite 590..... 1 00
70.....10c. to 3 00	53 Syepoorite 47.....
.....5c. to 1 50	98 Sylvanite 81.....25c. to 5 00
.....10c. to 5 00	137 Sylvite 141.....25c. to 1 00
1..... 25	525 Symplesite 558..... 75
0.....5c. to 1 00	656 A. Syngenite, Ap. 2-54.....
..... 25	247 Syntagmatite 235-239..... 75
.....15c. to 75	595 Szaibelyite 594.....
e, Ap. 2-52.....	445 Tabergite 493..... 50
8.....5c. to 3 00	237 Tabular Spar 210..... 5c. to 1 00
.....10c. to 50	148 Tachhydrite 119..... 75
140.....5c. to 1 50	253 Tachylyte 245.....
..... 75	272 C. Tachyaphaltite 275..... 50
.....	511 Tagilite 566..... 1 50
690..... 75	309 Talc 451.....5c. to 50
442.....	490 F. Talc-apatite 535..... 1 00
.....5c. to 1 00	400 A. Talcoïd 454.....
.....10c. to 5 00	153 A. Tallingite 122.....
.....25c. to 75	320 Taltalite 365.....
.....	Tammite, Ap. 2-55.....
58..... 1 00	102 Tanenite 86..... 1 50
.....5c. to 1 50	230 A. Tantalie Ochre 188.....
.....10c. to 1 50	473 Tantalite 514.....\$1 00 to 3 00
.....15c. to 1 50	Tapalpate, Ap. 2-55.....
.....25c. to 5 00	475 Tapiolite 518.....
.....15c. to 1 00	724 Tarnowitzite 694.....
4..... 50	817 Tasmanite 746..... 50
.....25c. to 1 00	662 Tauriscite 644.....
	566 Tavistockite 582.....

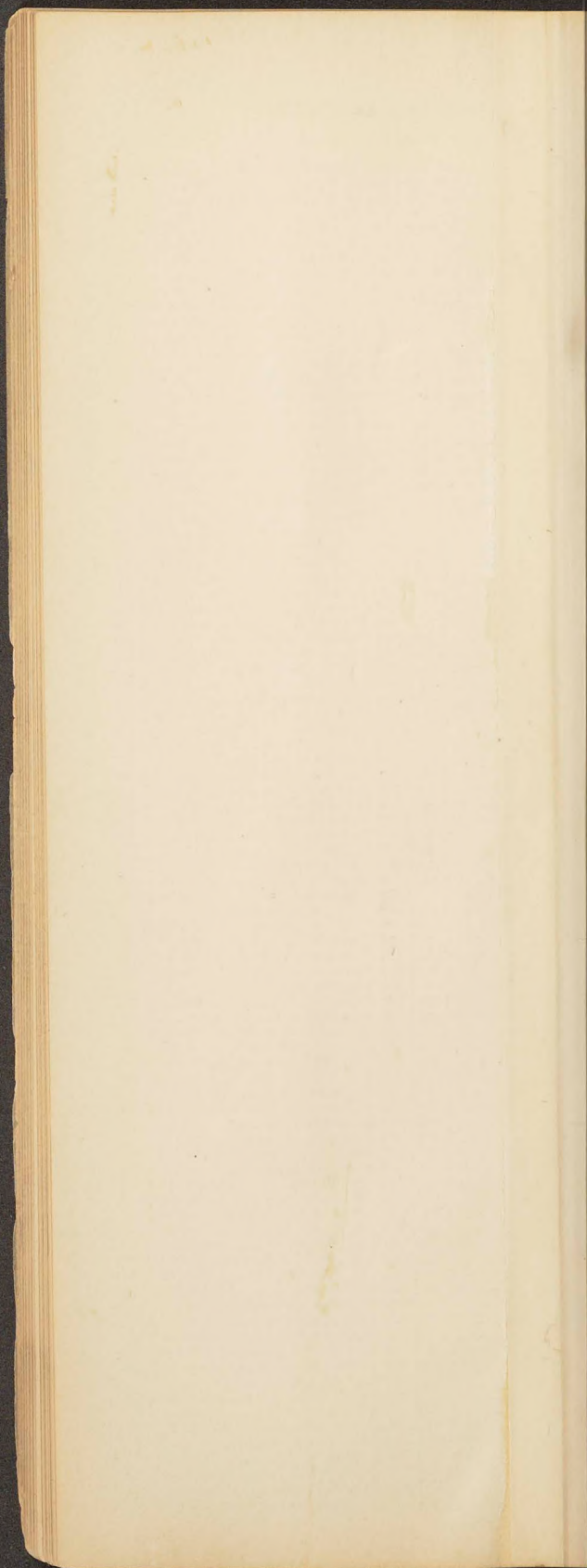




PRICE LIST OF SPECIES A

626 Taylorite 614.....\$	419 Tuesite 474.....
662 A. Tectite 644..... 1 00	715 Tufa Calcareou
Tellurate of Copper and Lead,	610 Tungstate of I
Ap. 2-55.....	614 " of Li
230 Tellurite 188.....	616 " of Li
31 Telluric Bismuth 30....50c. to 1 50	225 Tungstite 186.....
58 Telluric Silver 50.....50c. to 5 00	202 Turgite 167.....
21 Tellurium 19..... 3 00	497 Turnerite 540.....
99 " Foliated 82..... 1 50	563 Turquoise 580.....
98 " Graphic 81....25c. to 5 00	483 Tyrite 524.....
746 Tengerite 710.....	546 Tyrolite 570.....
127 Tennantite 104....50c. to 1 00	363 A. Uigite 412.....
178 Tenorite 136.....25c. to 1 00	602 Ulexite 598.....
262 Tephroite 259.....15c. to 75	87 Ullmannite 73.....
418 A. Teratolite 473..... 50	306 Ultramarine 331.....
404 A. Terra Sigillata 458....10c. to 50	408 Unghwarite 46.....
735 Teschemacherite 705.....	710 Uraconite 668.....
370 Tesselite 415..... 1 00	238 Uralite 222.....
31 Tetradymite 30..... 1 00	278 Uralorthite 285.....
125 Tetrahedrite 100....25c. to 3 00	573 Uranglimmer 5.....
498 Tetraphylline 541..... 50	706 Urangreen 667.....
747 Texasite 710.....	190 Uraninite 154.....
276 Thallite 281..... 50	572 Uranite 585.....
716 Tharandite 682....25c. to 1 00	706 Uranochalcite 6.....
629 Thenardite 615..... 75	710 Uranochre 668.....
737 Thermonatrite 705..... 1 00	376 B. ? Uranophar
411 C. 8 Thermophyllite 465..... 1 00	573 C. Uranospinite
757 Thierschite 718.....	496 Urdite 539.....
721 Thomait 688..... 50	778 Urpethite 731.....
169 Thomsenolite 129....50c. to 1 50	445 D. Vaalite, Ap.
377 Thomsonite 424....25c. to 1 00	Vaalite 805.....
721 Thoneisenstein 688....05c. to 25	316 Valencianite 33.....
365 Thorite 413.....75c. to 1 50	221 Valentinite 184.....
534 Thrombolite 562..... 1 00	Valerite, Ap. 2.....
280 Thulite 290.....25c. to 1 50	620 A. Vanadate of
460 Thuringite 507..... 1 00	622 A. Vanadate of
65 Tiemannite 56.....75c. to 2 00	(Vanadate 1
172 Tile Ore 134....15c. to 50	623 A. { Lake Supe
16 Tin, Native 17.....	per Region
192 " Oxyd 157.....5c. to 2 00	621 Vanadinite 610.....
80 " Pyrites 68..... 75	622 B. Vanadinite,
192 " Stone 157.....5c. to 50	49 Variegated Cop
83 " White Cobalt, 70....25c. to 2 00	316 Variolite 359.....
329 Titanite 383.....10c. to 5 00	565 A. Variscite 58.....
193 Titanic Acid 160, 164....5c. to 5 00	644 Vanquelinite 6.....
181 " Iron 143.....10c. to 2 00	411 Verd-antique 46.....
192 Toad's Eye Tin 158..... 1 00	445 A. Vermiculite
Tocornalite, Ap. 2-56.....	Vestan 806.....
789 Toluole 737.....	273 Vesuvianite 276.....
86 Tombazite 72..... 75	541 A. Veszelyite, A
325 Topaz 376.....10c. to 5 00	234 A. Victorite, Ap
231 " False 195.....10c. to 5 00	362 Villarsite 409.....
271 A. Topazolite 268....50c. to 1 50	238 B. Violan 223.....
804 Torbanite 742.....10c. to 50	Viridite, Ap. 2.....
572 Torbernite 585.....50c. to 1 50	61 Vitreous Copper
474 Torrelite 515..... 35	669 Vitriol, Blue 64.....
231 Touchstone 195.....10c. to 50	634 " Green 64.....
320 Tourmaline 365.....5c. to 5 00	633 " Lead 62.....
320 " Black 367....5c. to 1 00	666 " White 6.....
320 " Blue 367....25c. to 5 00	524 Vivianite 556.....
320 " Brown 367....5c. to 5 00	703 Voglianite 668.....
320 " Columnar 367. 15c. 1 00	755 Voglite 717.....
320 " Fibrous 367, 10c. to 50	428 Voigtite 486.....
320 " Green 367....25c. to 5 00	622 Volborthite 611.....
320 " Iron 367....5c. to 1 00	238 Volcanic Glass
320 " Lithia 367....25c. to 5 00	238 Volcanite 213.....
320 " Magnesia 367, 10c. 1 90	229 Volgerite 188.....
78 Towanite 65..... 1 00	675 Voltaite 652.....
316 Trachyte 359.....10c. to 50	57 Voltzite 50.....
335 A. Trautwinite, Ap. 2-56.....	311 Vosgite 343.....
353 Traversellite 406..... 1 00	632 Vulpinite 621.....
715 Travertine 680.....5c. to 1 00	218 Wad 181.....
247 Tremolite 233.....10c. to 50	495 Wagnerite 538.....
533 Trichalcite 562.....	800 Walchowite 741.....
Trichite 805.....	247 A. Waldheimite
231 A. Tridymite 805....50c. to 1 50	573 A. Walpurgite,
817 A. Trinkerite, Ap. 1-16.....	520 C. Wapplerite,
498 Triphylite 541.....50c. to 1 50	701 Warringtonite 6.....
499 Triplite 543..... 75	606 Warwickite 600.....
365 Tritomite 412..... 2 00	181 Washingtonite 1.....
632 Tripe Stone 621..... 50	Wasite 806.....
573 B. Trögerite, Ap. 1-16.\$1.00 to 2 50	175 Water 135.....
67 Troilite 57..... 1 00	554 Wavellite 575.....
555 Trolleite 577.....	232 Wax Opal 199.....
738 Trona 706.....25c. to 1 00	688 Websterite 658.....
266 Troostite 262.....10c. to 1 50	33 Wehrilite 32.....
332 Tscheffkinite 387.....	316 Weissigite 428.....
314 A. Tschermakite, Ap. 2-57.....	426 Weissite 425.....
673 Tschermigite 651..... 1 00	

.....\$ 50	299 Wernerite 319.....15c. to \$1 00
is 680.....5c. to 1 00	323 A. Westanite, Ap. 1-16.....
ron 601.....25c. to 2 50	813 B. Wheelerite, Ap. 2-60.....
ime 605.....25c. to 2 00	119 Wheel ore 96.....50c. to 3 00
ead.....50c. to 2 00	756 Whewellite 718.....
.....10c. to 1 00	221 White Antimony 184.....50c. to 2 00
.....\$1 00 to 7 50	238 " Cocolite 214.....15c. to 50
.....10c. to 1 50	666 " Copperas 647.....25c. to 1 00
.....1 00	309 " Garnet 334.....50c. to 2 00
.....1 50	729 " Lead Ore 700.....25c. to 2 00
.....10c. to 50	90 " Pyrites 75.....25c. to 2 00
.....25c. to 1 00	39 Whitneyite 37.....\$1 00 to 5 00
.....10c. to 5 00	250 Wichtisite 244.....50
.....1 00	459 B. Willcoxite, Ap. 2-61.....
.....10c. to 5 00	266 Willemite 262.....5c. to 1 50
.....1 00	411 Williamsite 465.....10c. to 1 00
.....50	422 Wilsonite 480.....
.....2 00	526 C. Winklerite, Ap. 2-61.....
86.....50c. to 1 50	601 A. Winkworthite, Ap. 1-17.....
.....1 50	490 Wiserin 528.....\$1 50 to 5 00
.....25c. to 2 00	276 Withamite, 281.....1 00
.....25c. to 1 50	726 Witherite 697.....25c. to 5 00
667.....1 50	121 Wittichenite 98.....1 00
.....75	265 Wöhlerite 261.....1 00
ne 805.....1 00	462 Wolchonskoite 509.....2 00
, Ap. 2-58.....1 00	92 A. Wolfachite, Ap. 1-17.....
.....	610 Wolframite 601.....25c. to 1 50
2-58.....	237 Wollastonite 210.....5c. to 1 00
.....50	830 E. Wollongongite, Ap. 1-17.....
.....50c. to 1 00	231 Wood, petrified, 196.....5c. to 1 00
.....	232 Wood-opal 199.....10c. to 1 00
52.....	231 Wood, Agatized, 196.....5c. to 1 00
.....	247 " Mountain 237.....25c. to 1 00
58.....	232 " Opalized 199.....10c. to 1 00
Lead 610.....	231 " Silicified, 196.....5c. to 1 00
Line and } 612	704 Woodwardite 666.....25c. to 1 50
Copper } 612	617 Wulfenite 607.....25 to 5 00
from the }	70 Wurtzite 59.....
rior Cop- } 612	329 Xanthitan 386.....
n }	133 Xanthoconite 108.....
.....50c. to 5 00	461 Xanthophyllite 508.....1 50
Ap. 1-16.....	207 Xanthosiderite 174.....25c. to 1 00
per 44.....25c. to 1 00	323 Xenolite 373.....1 50
.....1 00	490 Xenotime 528.....50c. to 5 00
2.....1 00	340 Xonaltite 397.....1 50
30.....1 50	730 Xylole 737.....
55.....25c. to 1 00	805 Xyloretinite 742.....
493.....10c. to 1 00	359 Xylotile 406.....75
.....15c. to 1 50	206 Yellow Ochre 172.....5c. to 25
Ap. 2-59.....	231 " Quartz 193.....
2-18.....	27 " Sulphuret of As. 27, 25c. 2 00
.....1 50	284 Yenite 296.....50c. to 1 50
.....	160 Yttrocerite 125.....75c. to 1 50
50.....	477 Yttrotantalite 519.....50c. to 1 50
r 52.....10c. to 1 50	331 Yttrotitanite 387.....
8.....25c. to 5 00	747 Zaratite 710.....15c. to 1 00
46.....25c. to 1 00	372 Zeagonite 418.....1 50
2.....25c. to 5 00	378 Zeolite Feather 426.....10c. to 5 00
47.....25c. to 1 00	392 " Foliated 442.....10c. to 5 00
.....15c. to 3 00	370 " Pyramidal 415.....25c. to 5 00
.....	383 " Cubic 432.....50c. to 3 00
.....1 00	550 A. Zepharovichite, Ap. 1-17...
.....75	572 A. Zeunerite, Ap. 2-62, 1.00 to 3 00
1.....3 00	781 Zietrisikite 733.....
213.....15c. to 1 00	14 Zinc, 17.....
.....50c. to 1 00	157, 158 Zinc Iodid and Bromid 122
.....1 00	56 Zinc Blende 48.....5c. to 5 00
.....1 00	749 " Bloom 711.....10c. to 1 00
.....1 00	723 " Carbonate 692.....10c. to 1 00
.....50	361 " Calamine 407.....5c. to 5 00
.....50	176 " Oxide 135.....5c. to 5 00
.....5c. to 50	361 " Silicate 407.....5c. to 5 00
.....5 00	185 " Spinel 149.....25c. to 4 00
1.....1 00	666 " Sulphate 647.....25c. to 1 00
242.....	176 Zincite 135.....5c. to 2 50
Ap. 1-16.....	750 A. Zinkazurite 713.....
Ap. 2-60.....	106 Zinkenite 88.....1 00
364.....1 50	634 Zinkosite 624.....
.....15c. to 1 50	64 Zinnober 55.....10c. to 5 00
143.....75	294 Zinnwaldite 314.....25c. to 1 50
.....	708 Zippeite 667.....75
.....5c. to 5 00	272 Zircon 272.....5c. to 5 00
.....25c. to 75	Zirlite, Ap. 2-63.....
.....25c. to 1 00	280 Zoisite 290.....10c. to 1 00
.....1 00	46 Zorgite 43.....
.....75	Zonochlorite Ap. 2-C3.....
.....75	112 Zundererz 91.....1 00
.....75	499 Zwieselite 544.....1 00



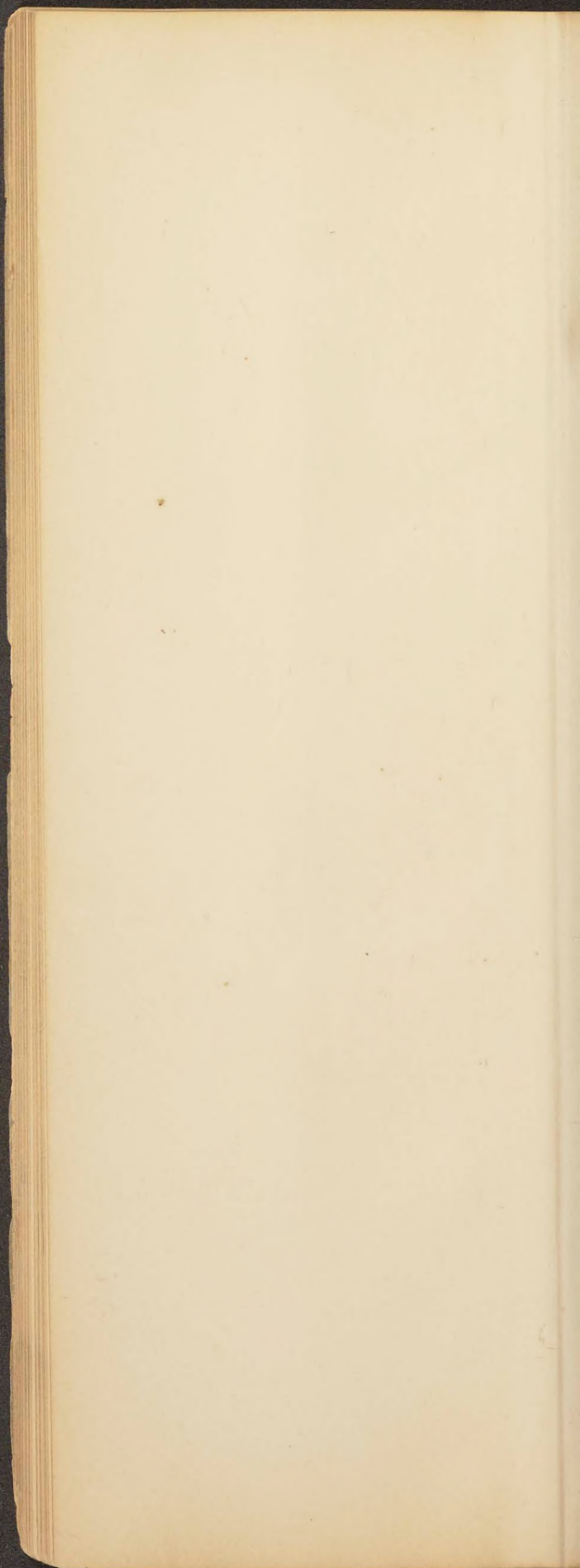


TABLE OF MIN

TO ASCERTAIN THE CHARACTERISTICS OF ANY SPECIES.—Look arranged) for the Species No., and by this the Species can be fo

The following are the abbreviations used in this table:

SPECIFIC GRAVITY ranges from Water 1 to Iridosmine 19-2

HARDNESS.—1 Talc; 2 Gypsum; 3 Calcite; 4 Fluorite; 5 10 Diamond.

COMPOSITION.—The following are the abbreviations of the Barium, Ba.; Beryllium, Be.; Bismuth, Bi.; Boron, B.; Carbon, C.; Cerium, Ce.; Chlorine, Cl.; Chromium, Cr.; Cobalt, Gold, Au.; Hydrogen, H.; Indium, In.; Iodine, I.; Iridium, Magnesium, Mg.; Manganese, Mn.; Mercury, Hg.; Molyb Osmium, Os.; Oxygen, O.; Palladium, Pd.; Phosphorus, P.; Pl Ruthenium, Ru.; Selenium, Se.; Silver, Ag.; Silicon, Si.; S Tellurium, Te.; Thallium, Tl.; Thorium, Th.; Tin, Sn.; T Yttrium, Y.; Zinc, Zn.; Zirconium, Zr. $\bar{c}$ represents the bar proper type we have not represented the barring of the other

CLEAVAGE OR FRACTURE.—Cubical, A.; Imperfect, J.; Earth Basal, D.; Dodecahedral, N.; Prismatic, E.; Uneven, H.; Pu P.; Foliated, L.; Malleable, R.; Scaly, T.; Fibrous, U.; Comp lar, Tr.; Radiated, Rad.; Distinct, ct.; Amorphous, Am.; Co diagonal, Cld.; Equal, =. Res. Resinous.

FUSIBILITY.—(1.) Fusible in the flame of a candle. (ex.) Stib (ex.) Natrolite. (3.) Infusible in the flame of a candle, but Almandine Garnet. (4.) Fusible B. B., in rather fine spliat the finest points and thinnest edges. (ex.) Bronzite. E Easily

CRYSTALLIZATION.—I. Isometric; II. Tetragonal; III. Or M Massive; F Fibrous; S Stalactitic; C Compact; A Amorph

COLOR AND STREAK.—1 White; 2 black; 3 red; 4 green; 5 J 12 steel; 13 iron; 14 tin; 15 bronze; 16 brass; 17 purple; 18 pin 25 aurora; 26 lemon; 27 cherry; 29 cochineal; 30 pomegrana 36 verdigris; 37 emerald; 38 grass; 39 pistacio; 40 sky; 41 indi 48 flesh; 49 lavender; 50 raven; 51 pitch; 52 wood; 53 rose; 54 61 liver; 62 oil; 63 clove; 64 milk; 65 asparagus; 66 dull; 6

LUSTRE.—70 Resinous; 71 Adamantine; 92 Vitreous; 73 Met 79 Silky; 80 Metalloidal; 81 Splendent; 72 Glassy; 31 Pearly the corresponding color number.

(I.) Native

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
1	Gold.....	3...	Au.....
1	A. Maldonite.....	Ap. 1-10	Au ² Bi.....
2	Silver.....	9...	Ag.....
3	Platinum.....	10...	Pt (Ir Rh Pd Fe).....
4	Platiniridium.....	11...	Fe Cu Os.....
5	Palladium.....	12...	Pd.....
6	Allopalladium.....	12...	Pd ³
7	Iridosmine.....	12...	Ir Os Ed Ru.....
8	Mercury.....	13...	Hg.....
9	Amalgam.....	13...	Ag Hg ² and Ag Hg ³
10	Arquerite.....	14...	Ag ⁶ Hg.....
10	A. Kongsbergite.....	Ap. 2-32	Ag ¹⁸ Ag.....
11	Gold Amalgam.....	14...	(Au Ag) ² Hg ⁶
12	Copper.....	14...	Cu.....
13	Iron.....	15...	Fe (Ni etc.).....
14	Zinc.....	17...	Zn.....
15	Lead.....	17...	Pb.....
16	Tin.....	17...	Cu Fe Sn Zn S.....
17	Arsenic.....	17...	As.....
18	Antimony.....	18...	Sb.....
19	Allemontite.....	18...	Sb As ₃
20	Bismuth.....	19...	Bi.....
21	Tellurium.....	19...	Te.....
22	Native Sulphur.....	20...	S.....
23	Selen Sulphur.....	21...	Se.....
24	Diamond.....	21...	C.....
25	Graphite.....	24...	C.....

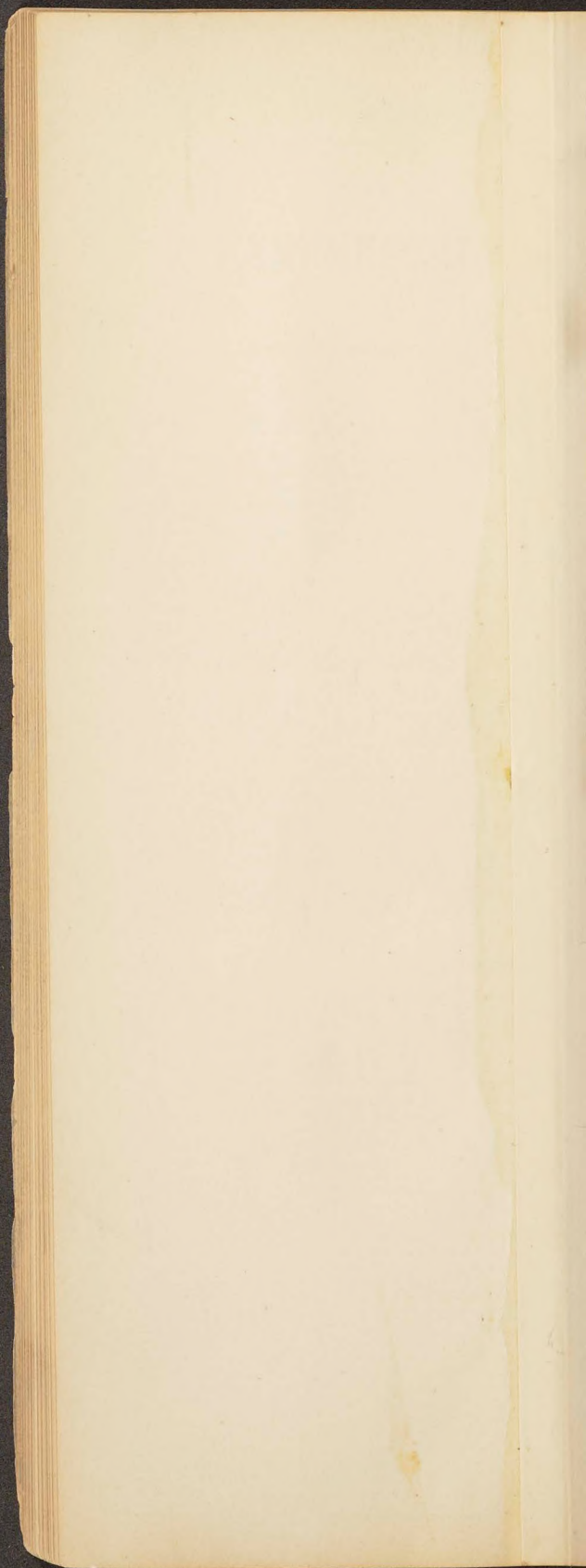
ERAL SPECIES.

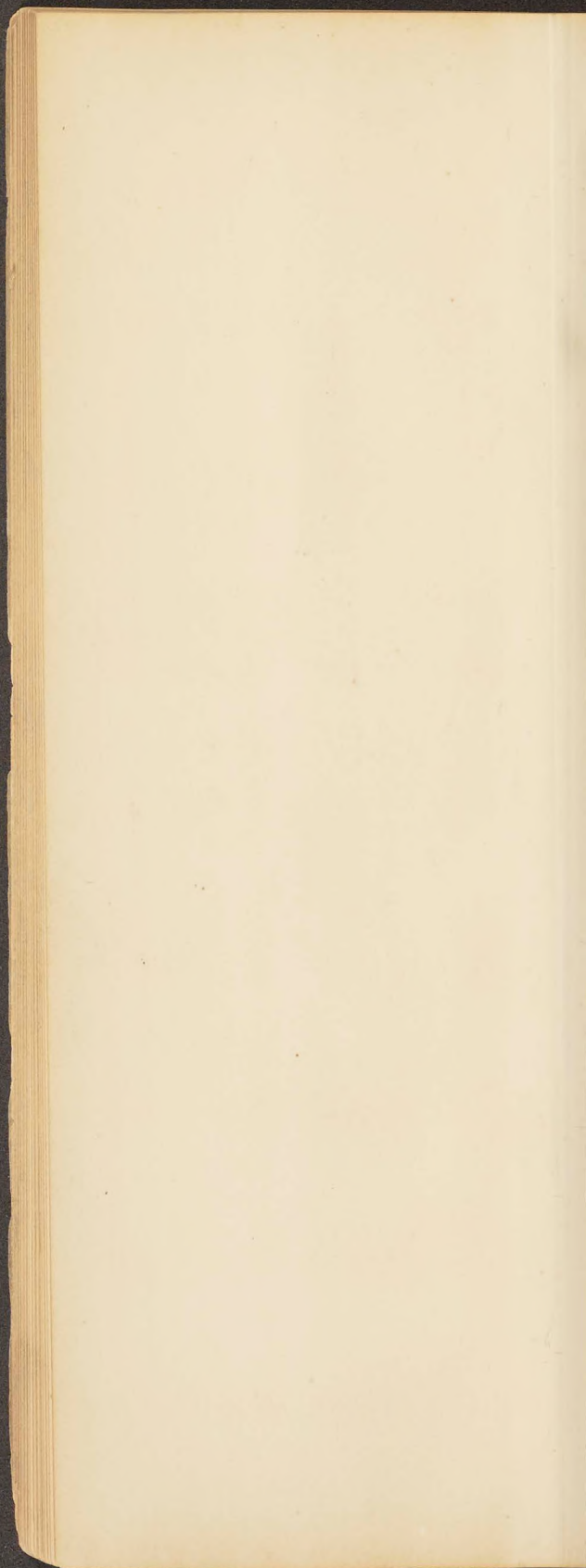
in the "Price List of Species and Varieties" (alphabetically
und in its order.

1.
Apatite; 6 Feldspar; 7 Quartz; 8 Topaz; 9 Corundum;
elements; Aluminum, Al.; Antimony, Sb.; Arsenic, As.;
omine, Br.; Cadmium, Cd.; Caesium, Cs.; Calcium, Ca.;
Co.; Copper, Cu.; Didymium, D.; Erbium, E.; Fluorine, F.;
Ir.; Iron, Fe.; Lanthanum, La.; Lead, Pb.; Lithium, Li.;
denum, Mo.; Nickel, Ni.; Niobium, Nb.; Nitrogen, N.;
latinum, Pt.; Potassium, K.; Rhodium, Rh.; Rubidium Rb.;
odium, Na.; Strontium, Sr.; Sulphur, S.; Tantalum, Ta.;
titanium, Ti.; Tungsten, W.; Uranium, U.; Vanadium, V.;
red C or doubled element of Dana. Owing to a lack of
elements. H represents water except in the hydrocarbons.
hy, G.; Rhombohedral, I.; Oct., B.; Sectile, X.; Granular, C.;
lverulent, Q.; Brittle, F.; Tough, K.; Hackly, M; Rhombic,
act, S.; Perfect, W.; Hexagonal, Y.; Conchoidal, Z.; Tabu-
ncretionary, Cry.; Rectangular, V.; Micaceous, Mi.; Clino-
nite. (2.) Fusible in the flame of a candle, in small fragments:
easily fusible B. B., even in somewhat large pieces. (ex.)
ers. (ex.) Orthoclase. (5.) B. B., becomes rounded only on
; V Volatile; D Difficulty; F Fusible; S Sublimes.
thorhombic; IV. Monoclinic; V. Triclinic; VI. Hexagonal;
ous; G Granular; P Pseudomorphous.
yellow; 6 blue; 7 gray; 8 brown; 9 pink; 10 copper; 11 lead;
h-beck; 19 pale; 20 velvet; 21 dark; 22 dirty; 24 sulphur;
te; 31 pearl; 32 hyacinth; 23 azure; 34 olive; 35 leek;
go; 42 peach; 43 apple; 44 ochre; 45 honey; 46 straw; 47 ash;
sea; 55 hair; 56 orange; 57 brick; 58 violet; 59 wax; 60 snow;
7 tile; 68 silver; 23 colorless; 69 light; (—all colors.)
tallic; 74 Shining; 75 Bright; 76 Weak; 77 Earthy; 78 Greasy;
66 Dull; 59 Wax; 51 Pitch. Other lustres indicated by

Elements.

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalli- zation.
5.....	5.....	.....	2.5.....	19.3.....	2.5-3.....	1..
9, 1.....	.....	A.....	1.5-2.....	8.2-9.7?	E.....	.....
1.....	1.....	.....	2.5.....	10.5.....	2-2.5.....	1..
12, 7.....	69, 7.....	.....	4-4.5 ..	16-19.....	.....	I..
1.....	.....	.....	6-7.....	22.6-23.....	.....	.....
12, 7.....	12, 7.....	.....	4.5-5.....	11.5.....	.....	I..
8, 1 to 12, 7	75.....	D. W.....	.....	.....	.....	.....
14, 1.....	7.....	.....	6-7.....	19.3-21.....	.....	III.
1.....	.....	.....	.....	13.5.....	.....	I..
68, 1.....	7.....	.....	3.....	13.7-21.....	1.....	I..
68, 1.....	7.....	R.....	.....	10.8.....	.....	I..
1.....	.....	.....	.....	.....	.....	.....
10, 3.....	10, 3.....	.....	3.....	8.9.....	3.....	I..
13, 7.....	.....	B.....	4.5.....	7.5.....	.....	I..
1-7.....	1-7.....	D. W.....	2.....	7.....	.....	VI.
11, 7.....	11, 7.....	.....	1.5.....	11.4.....	1.....	I..
12, 7.....	2.....	.....	4.....	4.4.....	E.....	M..
14, 1.....	14, 1.....	C.....	3.5 ..	6.....	V.....	III.
14, 1.....	14, 1.....	W.....	3.5.....	6.2.....	1.....	III.
14, 1, 3, 7...	73, 66, 81	.....	3.5.....	61.3.....	E.....	V..
3, 1.....	1.....	D.....	2.5.....	9.7.....	1.....	III.
14, 1.....	14, 1.....	Y.....	2 2.5.....	6.2.....	1	III.
24, 5.....	70.....	Z.....	1.5-2.5.....	2.....	E.....	IV.
8 or 56.....	70.....	Z.....	1.5-2.5.....	2.....	E.....	M..
— 1.....	71.....	B.....	10.....	3.5-3.6.....	.....	I..
13, 2.....	2.....	L.....	21.5.....	2.....	.....	III.





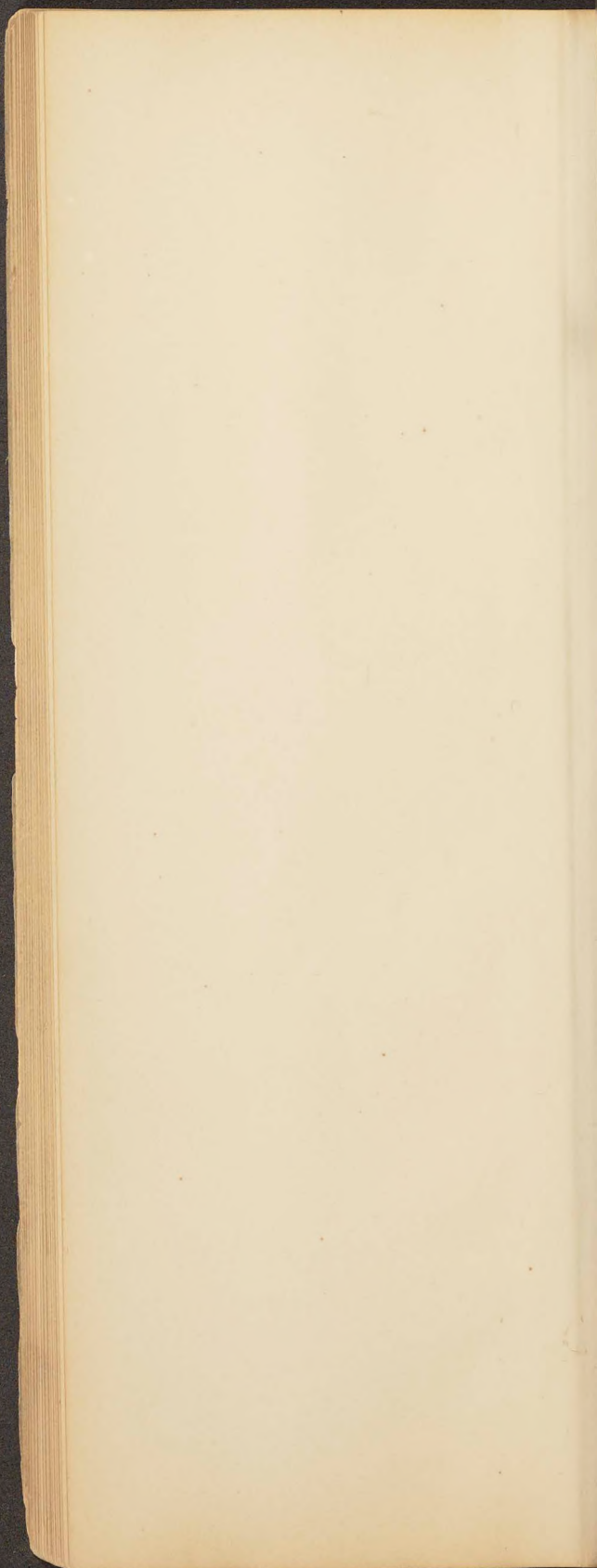
(II.) Sulphids, Tellurids, Selenids,

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
26	Realgar.....	26..	As S.....
27	Orpiment.....	27..	As S ₃
28	Dimorphite.....	28..	As S ₃
29	Stibnite.....	29..	Sb ⁴ S ₃
29	A. Livingstonite.....	Ap. 2-35	
30	Bismuthinite.....	30..	Bi S ₃
31	Tetradymite.....	30..	Bi Te ³ or Bi (Te S Se) ³
32	Joséite.....	31..	Bi Te S Se.....
33	Wehrlite.....	32..	Bi (Te S) with Te.....
33	A. Arsenotellurite.....	Ap. 2-5..	2 Te S ₂ As ₂ S ₃
34	Molybdenite.....	32..	Mo S ₂
35	Dyscrasite.....	35..	Ag ³ Sb.....
36	Chilenite.....	36..	Ag ⁶ Bi.....
37	Domeykite.....	36..	Cu ⁶ As.....
38	Algodonite.....	37..	Cu ¹² As.....
39	Whitneyite.....	37..	Cu ¹⁸ As.....
40	Argentite.....	38..	Ag S.....
40	C. Polyargyrite.....	Ap. 1-12	12 Ag S + Sb ² S ³
41	Naumanite.....	39..	Ag Pb Se.....
42	Eucairite.....	39..	(Cu Ag) Se.....
43	Crookesite.....	40..	(Cu Tl Ag) Se.....
44	Galenite.....	40..	Pb S.....
44	A. Huascolite.....	44..	Pb S.....
44	B. Cuproplumbite.....	44..	Pb S.....
45	Clausthalite.....	42..	Pb Se.....
46	Zorgite.....	43..	(Pb Cu) Se.....
47	Lehrbachite.....	41..	Pb Hg Se.....
48	Altaite.....	44..	Pb Te.....
49	Bornite.....	44..	(Cu Fe) S.....
50	Berzelianite.....	46..	Cu Se.....
51	Castillite.....	46..	Cu Pb Fe Ag Zn S.....
52	Alabandite.....	46..	Mn S.....
53	Syepoorite.....	47..	Co S.....
54	Pentlandite.....	47..	Ni Fe S.....
55	Grünaute.....	47..	Bi Ni Cu Fe S.....
56	Sphalerite.....	48..	(Zn Fe) S.....
56	A. Oldhamite.....	Ap. 2-42	
57	Voltzite.....	50..	4 Zn S + Zn O.....
58	Hessite.....	50..	Ag Te.....
58	A. Petzite.....	51..	Au Te + 3 Ag Te.....
59	Daleminzite.....	51..	Ag S.....
60	Acanthite.....	51..	Ag S.....
62	Chalcocite.....	52..	Cu S.....
61	Stromeyerite.....	54..	(Cu Ag) S.....
63	Sternbergite.....	54..	Ag Fe S.....
64	Cinnabar.....	55..	Hg S.....
64	A. Metacinnabarite.....	Ap. 1-10	Hg S.....
65	Tiemannite.....	56..	Hg Se.....
65	A. Onofrite.....	56..	Hg Se + 1 Hg S.....
66	Millerite.....	56..	Ni S.....
66	A. Beyrichite.....	Ap. 1-3..	3 Ni S + 2 Ni S ²
67	Troilite.....	57..	Fe S (or Fe ³ S ³).....
68	Pyrrhotite.....	58..	6 Fe S + Fe S ²
68	A. Chalcopyrrhotite.....	Ap. 2-11	Cu ⁴ Cu S ⁶
69	Greenockite.....	59..	Cd S.....
70	Wurtzite.....	59..	Zn S.....
71	Niccolite.....	60..	Ni ² As.....
71	A. Arsenical Cobalt.....	Ap. 1-1..	Co As.....
72	Breithauptite.....	61..	Ni ² Sb.....
72	A. Arite.....	Ap. 2-5..	As Lb Ni.....
73	Kaneite.....	61..	Mn As.....
74	Schreibersite.....	61..	P Fe Ni C.....
75	Pyrite.....	62..	Fe S ²
76	Hauerite.....	64..	Mn S ²
77	Cubanite.....	65..	Cu S + Fe S + 3 Fe S ²
78	Chalcopyrite.....	65..	Cu S + Fe S + Fe S ²
79	Barnhardtite.....	67..	2 Cu S + Fe S + Fe S ²
80	Stannite.....	68..	Cu Fe Sn Zn S.....
81	Linnæite.....	68..	2 (Co Ni) S + Co S ²
81	A. Horbachite.....	Ap. 2-28	4 Fe S ₃ + Ni S ₃
82	Carrollite.....	69..	2 (Cu Co) S + Co S ²
83	Smaltite.....	70..	(Co Fe Ni) As.....
83	A. Spathiopyrite.....	Ap. 2-52	Co Fe Cu As S.....
84	Skutterudite.....	71..	Co ² As ³
85	Cobaltite.....	71..	Co S ² + Co As.....
86	Gersdorffite.....	72..	Ni S ₂ + Ni As ₃
87	Ullmannite.....	73..	Ni S ₂ + Ni Sb.....
88	Corynite.....	74..	Ni S ² + Ni (As Sb).....
89	Laurite.....	74..	12 Ru ² S ³ + Os S ⁴

Arsenids, Antimonids, Bismuthids.

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
25, 3.	70.	Z.	1.5-2.	3.5.	E.	V.
26, 5.	31.	L.	1.5-2.	3.48.	E.	IV.
56, 5.	71, 81.		1.5.	3.58.		III.
11 to 12, 7.	11, 7.	D.	2.	4.5.	1.	IV.
75, 7.	3.		2.	4.81.		
11, 7.	E.		2.	4.5.	1.	IV.
12, 7.		D.	1.5-2.	7.5.	E.	III.
2, 7.		D.	1.5-2.	7.9.	E.	III.
12, 7.	75.	D. W.	1-2.	8.44.		VI.
8.						
6, 7.	4.	L.	1-1.5.	4.6.		V.?
68, 1.	68, 1.	D.	3.5-4.	9.6.	1.5.	IV.
68, 1.		C.	soft.			A.
14, 1.	2.	F.	3.5.	7.5.	E.	M.
12, 7.	15.	K.	4.	7.6.	E.	M.
15.	15.	M.	3.5.	8.3.	E.	M.
7, 2.	7, 2.	R.	2.5.	7.2.	1.5.	I.
13, 2 to 7, 2.	7, 3.	A.	soft.			I.
13, 2.	2.	A.	2.5.	8.	E.	I.
11, 7.	74.	C.			E.	M.
11, 7.			2.5.	6.9.	E.	M.
11, 7.	7.	A.	2.5.	7.5.	1.	I.
11, 7.						
11, 7.						
11, 7.	7, 2.	A.	2.5.	7-8.		I.
11, 7.	21, 7.	C.	2.5.	7.5.	E.	M.
11, 7.	2.	C.	2.	7.8.	V.	M.
14, 1.			2.	8.	E.	V.
10, 3, 5, 17.	2.		3.	5.	E.	I.
63, 1.	74.		soft.			M.
10, 3.	2.	L.	3.	5.2.	E.	M.
13, 2.	4.	A.	3.5.	4.	3.	I.
12, 7.				5.45.		M.
15, 5.	8.		3.5-4.	4.6.	E.	I.
12, 7.	21, 7.	B.	4.5.	5.1.	E.	I.
1, 5, 4, 2, 8.	70.	N.	3.5-4.	3.9-4.2.		I.
19, 8.		=	4.	5.8.		I.
21, 3, 5, 8.	72 to 78.		4-4.5.	3.66-3.81.		
11, 7.	7.	X.	2.5-3.	8.5.	1.	IV.
13, 2.	13, 2.		2.5.	9.	E.	IV.
7, 2.	7, 2.	R.	2-2.5.	7.044.		III.
13, 2.	13, 2.	R.	2.5.	7.2.	1.5.	IV.
12, 7.	7.	Z.	2.5-3.	5.7.	E.	IV.
12, 7.	7.		2.5-3.	6.3.	E.	IV.
18, 8.	2.	D.	1-1.5.	4.2.	E.	IV.
3.	3.	W.	2.5.	8.9.	V.	III.
7, 2.	73, 2.	H.	3.	7.70-7.748.		A.
11, 7.	2.	C.	2.5.	7.2.	E.	M.
7, 11, 21.	74.					A.
15, 5.	75.		3-3.5.	5.6.	E.	III.
11, 7.	73.	W.	3-3.5.	4.7.		VI.
8.	2.		4.0.	4.75.		M.
15, 5.	2, 7.	D.	4.	4.5.	E.	III.
8.				4.28.		M.
56 to 45, 5.	71.	E.	3-3.5.	4.9.		III.
8, 2.	72, 8.	V. E.	3.5-4.	3.98.		VI.
10, 3.	8, 2.	H.	5-5.5.	7.4.	E.	III.
10, 3.	3, 8.		5.5.	7.5.	3.	III.
7, 1.	73.	L. or C.	5.5.	7.5.	F.	M.
12, 7.			6.5.	7.01-7.22.		A.
16, 5.	8, 2.		6-6.5.	4.9.	E.	I.
8, 2.	8, 3.		4.	3.46.	3.	I.
15, 5.	3, 15.	A.	4.	4.1.	E.	I.
16, 5.	4, 2.	H.	3.5.	4.3.	2.	II.
15, 5.	7, 2.		3.5.	4.5.	E.	M.
12, 7.	2.		4.	4.4.	E.	M.
12, 7.	2, 7.		3.5.	4.9.	E.	I.
8, 8 to 12, 7.	2.	J.	4.5.	4.43.		M.
14, 1.	7.		5.5.	4.85.	E.	I.
14, 1.	7, 2.	B.	5.5.	6.4-7.2.	E.	I.
14, 1.			4.5.	6.7.		III.
7, 1.		B.	6.	6.7.	E.	I.
1, 3.	7, 2.	B.	5.5.	6.	E.	I.
1, 7.	7, 2.		5.5.	5.6-6.9.	E.	I.
12, 7.			5.5.	6.3.	3.	I.
7, 1.	2.	H.	4.5-5.	6.	E.	I.
21, 13, 2.	75, 73.	ct. B.	7+	6.99.		I.





Species No.	SPECIES.	Page in Dana.	COMPOSITION.
90	Marcasite.....	75...	Fe S ₂
91	Leucopyrite.....	76...	Fe As.....
92	Rammelsbergite.....	77...	Ni As ₂
92	A. Wolfachite.....	Ap. 1-17	Ni S ² +Ni (As Sb) ₂
93	Lölingite.....	77...	Fe As S.....
93	A. Glaucopyrite.....	Ap. 1-6	S As Sb Fe Co Cu.....
94	Arsenopyrite.....	78...	Fe S ₂ +Fe As.....
95	Glauco-dot.....	80...	(Co Fe) S ² +(Co Fe) As...
96	Pacite.....	81...	Fe ² +4 Fe As ²
97	Alloclasite.....	81...	2Co S ² +Co As+4 Bi As...
98	Sylvanite.....	81...	(Ag Au) Te ³
98	A. Calaverite.....	795...	Au Te ₄
99	Nagyagite.....	82...	Pb Au Te S.....
100	Covellite.....	83...	Cu S.....
100	A. Melonite.....	801...	Ni ₂ Te ₃
101	Chalcostibite.....	85...	Cu S+Sb S ₂
102	Emplectite.....	86...	Cu S+Bi S ³
103	Chiviatite.....	86...	2 (Cu Pb) S+3 Bi S ³
104	Berthierite.....	86...	Fe S+Sb S ₃
105	Sartorite.....	87...	Pb S+As S ³
106	Zinkenite.....	88...	Pb S+Sb S ₃
107	Jordanite.....	88...	Pb As S.....
108	Miargyrite.....	88...	Ag S+Sb S ₃
109	Plagionite.....	89...	Pb S Sb.....
110	Binnite.....	90...	3 Cu S+As S ³
111	Brongniardite.....	90...	2 (Pb Ag) S+Sb S ₃
112	Jamesonite.....	90...	2 Pb S+Sb S ₃
112	A. Cosalite.....	797...	2 Pb S+Bi S ₃
113	Dufrenoy'site.....	92...	2 Pb S+As S ₃
113	A. Diaphorite.....	Ap. 1-4	S Sb Pb+Ag.....
114	Freieslebenite.....	93...	5 (Pb Ag) S+2 Sb S ₃
115	Pyrostilpnite.....	93...	S Sb Ag.....
116	Rittingerite.....	94...	S Sb Ag?.....
117	Pyrargyrite.....	94...	3 Ag S+Sb S ₃
118	Proustite.....	96...	3 Ag S+As S ₃
119	Bournonite.....	96...	3 (Cu Pb) S+Sb S ₃
120	Stylo-type.....	98...	3 (Cu Fe Ag) S+Sb S ₃
121	Wittichenite.....	98...	3 Cu S+Bi S ³
121	A. Klaprotholite.....	Ap. 1-8	3 Cu S+Bi ² S ³
122	Boulangerite.....	99...	3 Pb S+Sb S ₃
122	A. Epiboulangerite.....	Ap. 1-5	S Sb Pb.....
122	B. Schirmerite.....	Ap. 2-50	Pb Ag Bi S.....
123	Kobellite.....	99...	3 Pb S+(Bi Sb) S ²
124	Aikinite.....	100...	3 (Cu Pb) S+Bi S ³
125	Tetrahedrite.....	100...	4 (Cu S)+Lb S ₃
126	Polytelite.....	104...	S Sb Pb Ag Fe.....
127	Tennantite.....	104...	4 (Cu Fe) S+As S ³
127	A. Julianite.....	Ap. 1-8	S As Cu Sb.....
128	Meneghinite.....	105...	4 Pb S Sb S ₃
129	Geocronite.....	105...	5 Pb S+(Sb As) S ³
130	Stephanite.....	106...	5 Ag S+Sb S ³
131	Polybasite.....	107...	9 (Ag Cu) S+(Sb) As ₂ S ³
132	Enargite.....	107...	3 Cu S+As ² S ⁵
132	A. Epigenite.....	Ap. 1-5	Cu Fe As S.....
132	B. Famatinite.....	Ap. 2-20	{ 4 (3 Cu ₂ S Sb ₂ S ₅)+ 3 Cu ₂ S As ₂ S ₅ }
133	Xanthoconite.....	108...	Ag As S.....
134	Clayite.....	108...	S As Sb Pb Cu.....
135	Bolivianite.....	109...	S Ag Sb.....

(III.) Compounds of Ch

136	Calomel.....	111...	Hg ₂ Cl.....
137	Sylvite.....	111...	K Cl.....
138	Halite.....	112...	Na Cl.....
138	A. Chlorocalcite.....	Ap. 2-11	Ca Cl ₂ +K Na Mn.....
139	Sal Ammoniac.....	114...	N H ₄ Cl.....
140	Cerargyrite.....	114...	Ag Cl.....
141	Embolite.....	115...	Ag (Cl Br).....
142	Bromyrite.....	116...	Ag Br.....
143	Iodyrite.....	117...	Ag I.....
144	Coccinite.....	117...	Hg I?.....
144	A. Bordosite.....	Ap. 2-8...	Ag Cl+Hg ₂ Cl.....
145	Cotunnite.....	117...	Pb Cl.....
146	Molysite.....	118...	Fe ² Cl ³
146	A. Nantokite.....	Ap. 1-11	Cu ₂ Cl.....
147	Carnallite.....	118...	K Cl+2Mg Cl+12 H.....
148	Tachydrate.....	119...	(Ca Mg) Cl+4 H.....

TS' AGENCY CATALOGUE.

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
19, 5 to 1	2, 7		6-6.5	4.7	E	III.
68, 1	7, 2		5.5	6.8-8.7	D	IV.
7, 1	7-2		5.5	7	E	IV.
68, 1	2	73	5.5	6.372		III.
68, 1	7, 2		5.5	6.8-8.7	D	IV.
11, 7 to 14, 1	7, 3		4.5	7.181		III.
68, 1	7, 2	H	5.5	6.2	2	IV.
7, 1	2	P	5	6	E	IV.
14, 1	73, 2		4-4.5	6.297		III.
12, 7	2	P	4.5	6.6	E	IV.
12, 7			2	8	E	V.
15, 5	5, 7	F. H				M.
2, 7	7	D-L	1-1.5	7	E	II.
41, 6 to 2		D	1.5-2	4.6		III.
3, 1	73, 21, 7	D. Y				
11, 7	2	E	3.5	4.8	I	IV.
14, 1					E	IV.
11, 7				6.92	1	M.
12, 7			2-3	4.2	1.5	IV?
11, 7	8	D	3	5.3	E	IV.
11, 7			3-3.5	5.3	I	IV
11, 7	2	E			E	IV.
13, 2	27, 3		2.5	5.2	1	V.
11, 7			2.5	5.4	1	V.
12, 7	27, 3	F	4.5	4.4	E	I.
2, 7			3	5.9	E	I.
11, 7		D	2-3	5.6	1	IV.
11, 7	73	H				
11, 7	8	D	3	5.5	E	IV.
12, 7	73	H	2.5-3	5.902		
12, 7	7	E	2-2.5	6-6.4	E	V.
32, 3	31, 71	X	2	4.2-4.25	1	IV.
56, 5	71, 73	F	1.5-3		E	IV.
21, 3 to 2	71	Z	2.5	5.8	1	III.
29, 3	71	Z	2.5	5.5	1	III.
12, 7	13, 3		2.5	5.8	1	IV.
13, 2	13, 2		3	4.7	1	IV.
12, 7	2		3.5	4.6-5	E	IV.
12, 7 to 5	73, 2	ct. C	2.5	4.6		
11, 7			2.5-3	5.9	1	IV.
21, 67	73			6.309		III.
11, 71 to 2	73	II. F	soft		E	M.
11, 7			soft	6.3	1	F.
11, 7			2-2.5	67	1	IV.
11, 7			3.5	4.5-5.1	1.5	I.
				5.483		
13, 2	7		3.5-4	4.5	1.5	I.
21, 3, 11	73, 71	F	soft	5.12	E	
11, 7			2.5	6.3	1	V.
11, 7		C	2-3	6.5	1	IV.
13, 2	2		2.5	6.26	1	IV.
13, 2	13, 2	II	2.3	6.25	E	IV.
7, 8, to 13, 2	73, 7	F. H	3	4.43-4.45	E	III.
12, 7	2	C	3.5		E	IV.
10, 3, 7	2	II. F	3.5	4.57	E	M.
30-5	71		2	5-1	E	III.
2, 11, 7	73, 2, 11, 7	X	2.5			I.
11, 7	sub, 73	ct	2.5	4.820		III.

lorine, Bromine, Iodine.

7-1	71		1.5	6.5	V	II.
23 to 1	72	A	2	1.9-2	E	I.
23, 1, 3, 37	72	A	2.5	2.15	E	I.
						I.
1, 5	72		1.5-2	1.53	V	I.
31, 7	70, 71		1-1.5	5.5	1	I.
4 to 21, 5	71		1-1.5	5.3-5.8	1	I.
4-5	71		2-3	5.8-6	1	I.
26, 5	71	D	1.5	5.7	1	III.
3 to 5	71				S	M.
5 to 3						
5-1	71		2	5.2	E	IV.
8, 3, 5						M.
1						
64, 1	74, 78	Z			E	
5		2 ct			E	M.



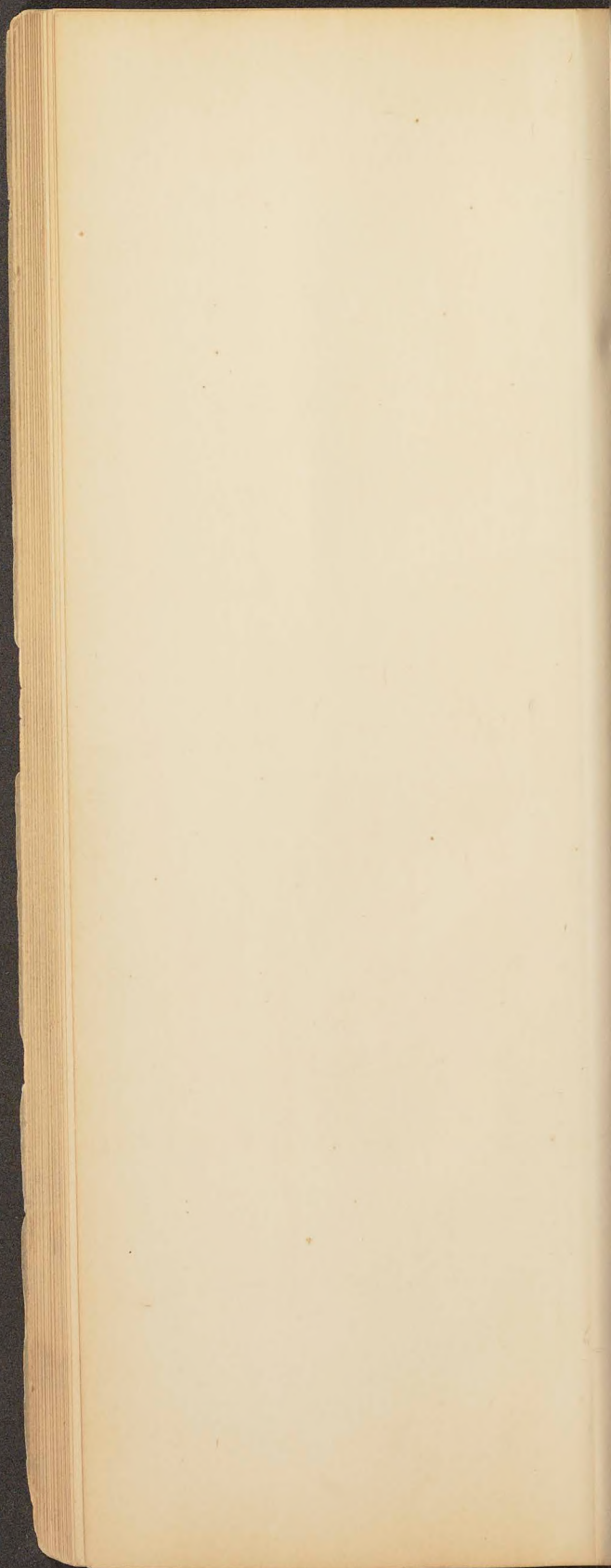


TABLE OF MIN

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
148	A. Erythrosiderite.....	Ap. 2-19	2 K Cl + Fe ₂ Cl ₃ + 2 H.....
149	Kremersite.....	119...	K Cl + Am Cl + Fe ² Cl ³ + H.....
150	Matlockite.....	119...	Pb Cl + Pb.....
151	Mendipite.....	120...	Pb Cl + 2 Pb.....
152	Schwartzembergite.....	120...	Pb I + 2 Pb O.....
153	Atacamite.....	121...	3 Cu H + Cu Cl H.....
153	A. Tallingite.....	122...	4 Cu H + Cu Cl H.....
154	Percylite.....[um	122...	Pb Cu Cl O H.....
155	Chloride of Magnesi.....	122...	Mg Cl.....
156	Chloride of Manganese.....	122...	Mn Cl ₂
157	Iodid of Zinc.....	122...	Zn I ₂
158	Bromid of Zinc.....	122...	Zn Br.....

(IV.) Fluorine

159	Fluorite.....	123...	Ca Fl.....
160	Ytrocrite.....	125...	(Ca Ce Y) Fl.....
161	Fluocerite.....	126...	Ce Fl + Ce ² Fl ³
162	Fluocerine.....	126...	Ce ² Fl ³ + 3 (Ce ² O ³ + H).....
163	Fluellite.....	126...	Al Fl.....
163	A. Ralstonite.....	Ap. 1-13	Al Ca Mg Fl H.....
163	B. Sellaite.....	Ap. 1-14	Mg Fl?.....
164	Cryolite.....	126...	3 Na Fl + Al ² Fl ³
165	Arksutite.....	128...	2 (Ca Na) Fl + Al ₂ Fl ³
166	Chiolite.....	128...	3 Na Fl + 2 Al ² Fl ³
167	Chodneffite.....	128...	2 Na Fl + Al ² Fl ³.....[2 H
168	Pachnolite.....	129...	3 (Ca Na) Fl + Al ² Fl ³ +
169	Thomsenolite.....	129...	2 (Ca Na) F + Al ² F ³ + 2 H.....
169	A. Hagemannite.....	130...	F Si Al Fe Mg Ca Na.....
170	Gearksutite.....	130...	2 Ca Fl + Al ² Fl ³ + 4 H.....
171	Prosopite.....	130...	Si F Al Ca H.....

(V.) Oxygen

172	Cuprite.....	133...	Cu O.....
173	Periclasite.....	134...	Mg Fe.....
174	Bunsenite.....	134...	Ni O.....
175	Water.....	135...	H ₂ O.....
176	Zincite.....	135...	Zn O.....
177	Massicot.....	136...	Pb O.....
178	Melaconite.....	136...	Cu O.....
178	A. Delafossite.....	Ap. 2-16	Cu O Fe O ₃ Al O ₃ ?.....
179	Corundum.....	137...	Al O ₃
180	Hematite.....	140...	Fe O ₃
180	A. Martite.....	142...	Fe O ₃
181	Menaccanite.....	143...	(Ti Fe) ₂ O ³
181	A. Iserite.....	145...	Fe O Ti O ₂ + Fe O ₃
182	Perofskite.....	146...	Ca O Ti O ₂
183	Spinel.....	147...	(Mg O Fe O) (Al O ₃ Fe O ₃) ₂
184	Hercynite.....	148...	Fe O Al O ₃
185	Gahnite.....	149...	(Zn O Mg O) (Al O ₃ Fe O ₃).....
185	A. Dimagnetite.....	151...	Fe O Fe O ₃
186	Magnetite.....	149...	Fe O Fe O ₃
187	Magnesianferrite.....	152...	Mg O Fe O ₃
188	Franklinite.....	152...	(Zn, Mn, Fe) (Mn Fe).....
188	A. Jacobsite.....	Ap. 1-8	(Mn Mn) (Mn, Fe).....
189	Chromite.....	153...	Fe O Cr O ₃
190	Uraninite.....	154...	U O U O ₃
191	Chrysoberyl.....	155...	Be ³ O Al O ₃
192	Cassiterite.....	157...	Sn O.....
193	Rutile.....	159...	Ti O ₂
194	Octahedrite.....	161...	Ti O ₂
195	Hausmannite.....	162...	Mn ² O Mn O ₂
196	Braunite.....	163...	2 Mn ² O Mn O ₂ + Mn O ₂ Si O ₂
197	Minium.....	163...	Pb ³ O ⁴
198	Brookite.....	164...	Ti O ₂

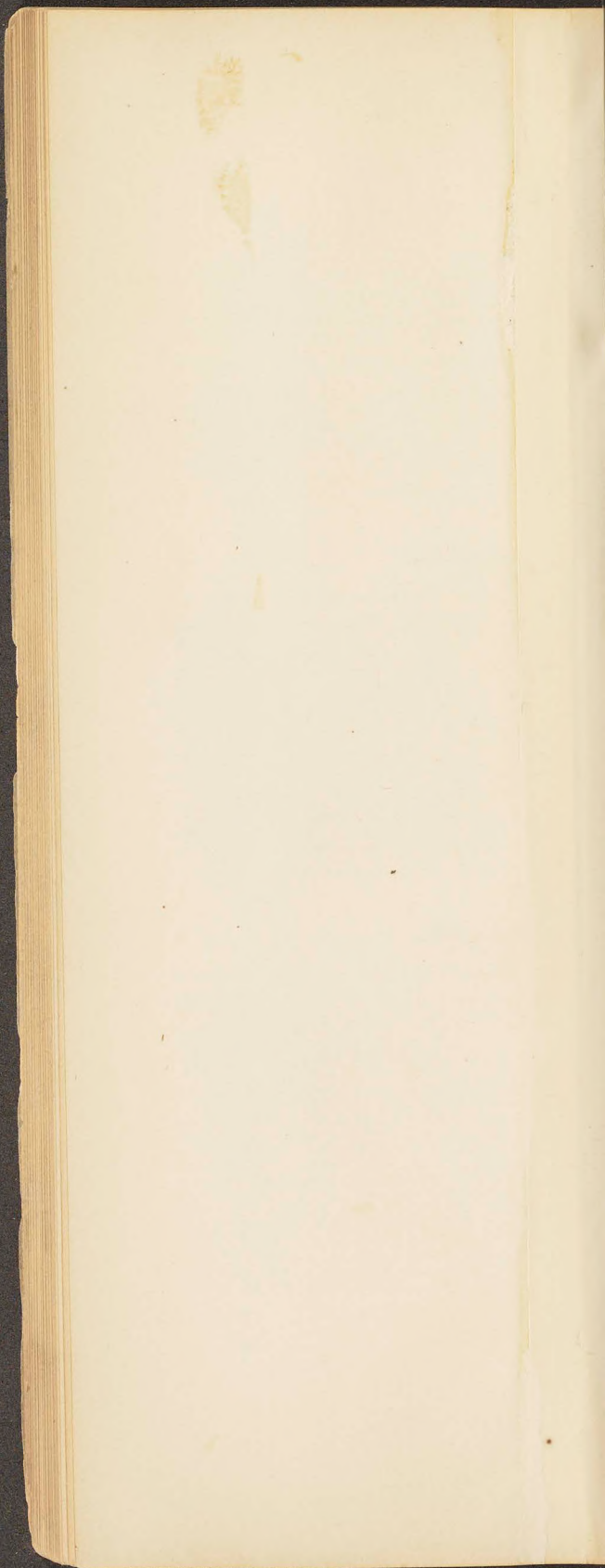
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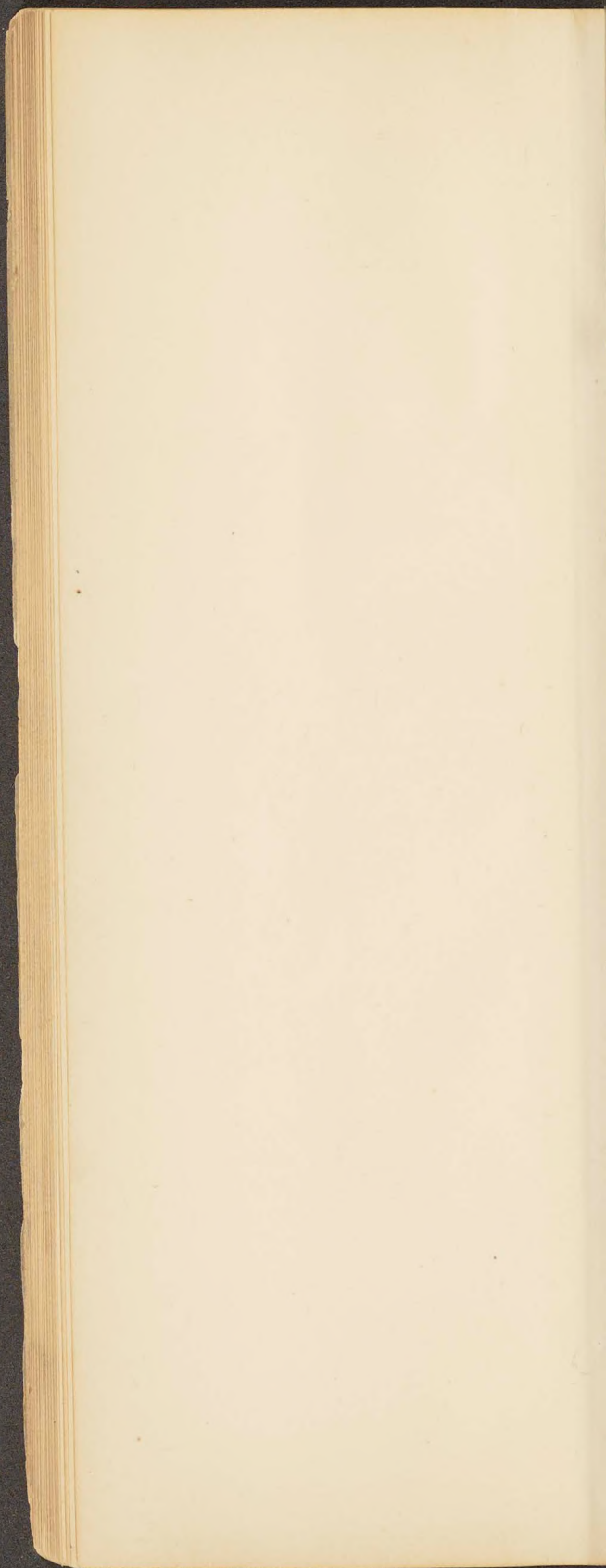
e Compounds.

.....—.....	72	B	4	3.18	3	I
1-7-6	19, 72		4.5	3.45		M
5-67-3	76		4 5	4.7		III
5, 3	72 or 70, 5		4.5-5			I
1	72					III
23, 1	72		4.5	2.5		I
23	72	W. Z	5	2.972		II
1-2	72	D. W	2.5	3	1	IV?
1	72		2.5	3.1	E	M
60-1			4	2 72	1	II
1			4	3	E	II
23-1	72		2.5-4	2.75	E	V
1, 3	72, 31	D. W	2.5-4	2.74	E	IV
44, 5	74		3-3.5	2.59	E	
1	22		2		E	
23, 1, 7			4.5	2.890		IV

Compounds.

29-3	77, 71	B.	3.5-4	6	E.	I.
7 to 21, 4			6	3.674		I.
39, 4	72, 8, 2		5.5	6.398		I.
23				0.918		VI.
56, 5, 3	sub. 71	D. C. F.	4-4.5	5.43-5.7		VI.
5	66		2	8		III.
2 to 8, 2	73 to 77		3	5.95	D.	IV.
21, 7	2, 7, 73		2.5	5.07		
1, 7, 6 & —	72	I.	9	4		III.
12, 7 to 2	3	T. U. S.	5.5-6.5	5		III.
13, 2	sub. 73		6-7	4.809		I.
2	2		5-6			
				4.817		I.
13, 2 to 5	7		5.5	4.03		I.
2, 6, 8, 5, 4 & 2	72	Z.	8	3.5-4.1		I.
2	72, 4	72, 4	7.5-8	3.91		I.
4-2	7, 92, 78		7.5-8	4-4.5		I.
				6		
13-2	2	B.	5.5-6.5	4.9-5.2	5	I.
2	2		6-6.5	4.5-4.6		I.
13-2	3, 8		5.5-6.5	5.1		I.
2	2, 8		6	4.75		I.
13-2	8	II	5.5	4.3		I.
8-2	8, 2	Z. H.	5.5	6.4-7		I.
65 to 67, 4	72		8.5	3.7		IV.
8-2	71 and 66		6-7	6.4-7.1		II.
3, 8, 5, 2	71	E.	6.5	4.2		II.
6, 8, 3, 2	71	B.	5.5	3.8-3.9		II.
8-2	3	D.	5-5.5	4.7		II.
8-2	2		6-6.5	4.7		II.
3	66		2-3		1	
5, 3, 8, 2	71		5.5-6	3.9-4.2		V.





Species No.	SPECIES.	Page in Dana.	COMPOSITION.
198	A. Eumanite	165	.....
199	Pyrolusite	165	Mn O ₂
200	Crednerite	166	Cu ³ O Mn ² O ₃
201	Plattnerite	167	Pb O ₂
201	A. Vanadic ochre	167	.....
202	Turgite	167	Fe ² O ₃ H.....
203	Diaspore	168	Al O ₃ H.....
204	Göthite	169	Fe O ₃ H.....
205	Manganite	170	Mn O ₃ H.....
206	Limonite	172	Fe ² O ₃ H ³
207	Xanthosiderite	174	Fe O ₃ H ²
208	Beauxite	174	(Al O ₃ , Fe O ₃) H ²
209	Eliasite	175	R O ₃ H ²
210	Brucite	175	Mg O H.....
211	Pyrochroite	177	(Mn O Mg O) H.....
212	Gibbsite	177	Al O ₃ H ³ O ₃
213	Limnite	178	Fe O ₃ H ³
214	Hydrotalcite	178	Al O ₃ , Mg O, H.....
214	A. Namaqualite	Ap 1-11	.....
215	Pyroaurite	179	Fe O H ³ +6 Mg O H+6 H.....
216	Gummite	179	(U O ₃ , Fe O ₃) H ³
217	Psilomelane	180	Mn O ₂ , Ba O ₂ , H.....
218	Wad	180	Mn O ₃ H.....
218	A Heterogenite	Ap. 2-27	O, Co, Cu, Fe, Bi, Al, Ca.....
218	B Wad (Asbolite)	181	Mn O ₃ , Co O, H.....
218	D. Lithiophorite	Ap. 1-9	{ Mn O ₃ Al O ₃ Fe O Co O } { Cu O Ba O Li O H..... }
218	E. Rabbionite	Ap. 1-13	Mn, Co, Fe, Cu, O.....
219	Arsenolite	183	As O ₃
220	Senarmontite	184	Sb O ₃
221	Valentinite	184	Sb O ₃
221	A Claudetite	1796	As O ₃
222	Bismite	185	Bi O ₃
223	Karlinite	185	Bi O ₃ with Bi S.....
224	Molybdate	185	Mo O ₃
224	A Ilsemanite	Ap. 1-7	Mo O ₂ +4 Mo O ₃
225	Tungstite	186	W, O ₃
225	A. Meymacite	Ap 2-38	W, O ₃ 2 H.....
226	Kermesite	186	Sb O ₃ +2 Sb S ₃
227	Cervantite	187	Sb O ₃ , Sb O ₅
228	Stibiconite	188	Sb O ⁴ +H.....
229	Volgerite	188	Sb O ⁵ +5 H.....
230	Tellurite	188	Te O ₂
230	A. Tantalie Ochre	188	Ta.....
231	— Quartz	189	Si O ₂
231	A. Tridymite	805	Si O ₂
231	B. Asmanite	Ap 2-5	Si O ₂
232	Opal	198	Si O II.....
233	Jenzchite	201	Si O ₂
234	Enstatite	208	MgO SiO or (MgO FeO) SiO ₂
234	A. Victorite	Ap 2-18	.....
235	Hypersthene	209	(Mg O ₂ Fe O) Si O ₂
236	Diaclasite	210	(Mg O, Fe O, Ca O) Si O ₂
237	Wollastonite	210	Ca O Si O ₂
237	A. Edforsite	212	2 Ca O 3 Si O ₂
238	A. Omphacite	223	R O R O ₃ , Si O ₂
238	B Violan	223	Si Al Fe Mn Mg Ca Na.....
239	Aegirite	223	R ³ O Si ³ O ₂ +Fe O ₃ Si ³ O ₂
238	A. Pyroxene	212	(R Si or (R ³ R) (Si Al ³) ³
240	Acmite	224	(Fe, Na) ³ Si ³ +2 Fe Si ³
241	Rhodonite	225	Mn O Si O ₂
242	Babingtonite	227	3 R ³ O Si ³ O ₂ +Fe O ₃ Si ³ O ₂
243	Spodumene	228	(¹ / ₅ (Li, Na) ³ + ⁴ / ₅ Al) Si ³
244	Petalite	229	Al O ₃ , Li O, Na O, Si O ₂
245	Kupferite	230	Mg O Si O ₂
245	Anthophyllite	231	Fe O Si O ₂ +3 Mg O Si O ₂
246	A. Piddingtonite	232	R O R O ₃ +Si O ₂
247	Amphibole	232	R Si & (R ³ R) (Si Al ³) ³
247	A. Waldheimite	242	R O Si O ₂
247	B. Kokscharoffite	242	R O Si O ₂ +R O ₃ Si O ₂
247	C. Schefferite	242	R O+Si O ₂ —R O Si O ₂
247	D. Nigrescite	Ap. 1-12	R+R O R O ₃ Si O ₂
248	Arfvedsonite	243	Fe O ₃ Fe O Mn O Na O Si O ₂
249	Crocidolite	243	Fe O Mg O, Na, O Si O ₂ , H.....
250	Wichtisitite	244	(¹ / ₅ R ³ O+ ¹ / ₅ R O ₃) Si ³ O ₂
251	Glaucophane	244	(² / ₅ R ³ O+ ² / ₅ R O ₃) Si ³ O ₂
252	Sordavalite	244	Al O ₃ , Fe O, Mg O, Si O ₂ , H.....

S' AGENCY CATALOGUE.

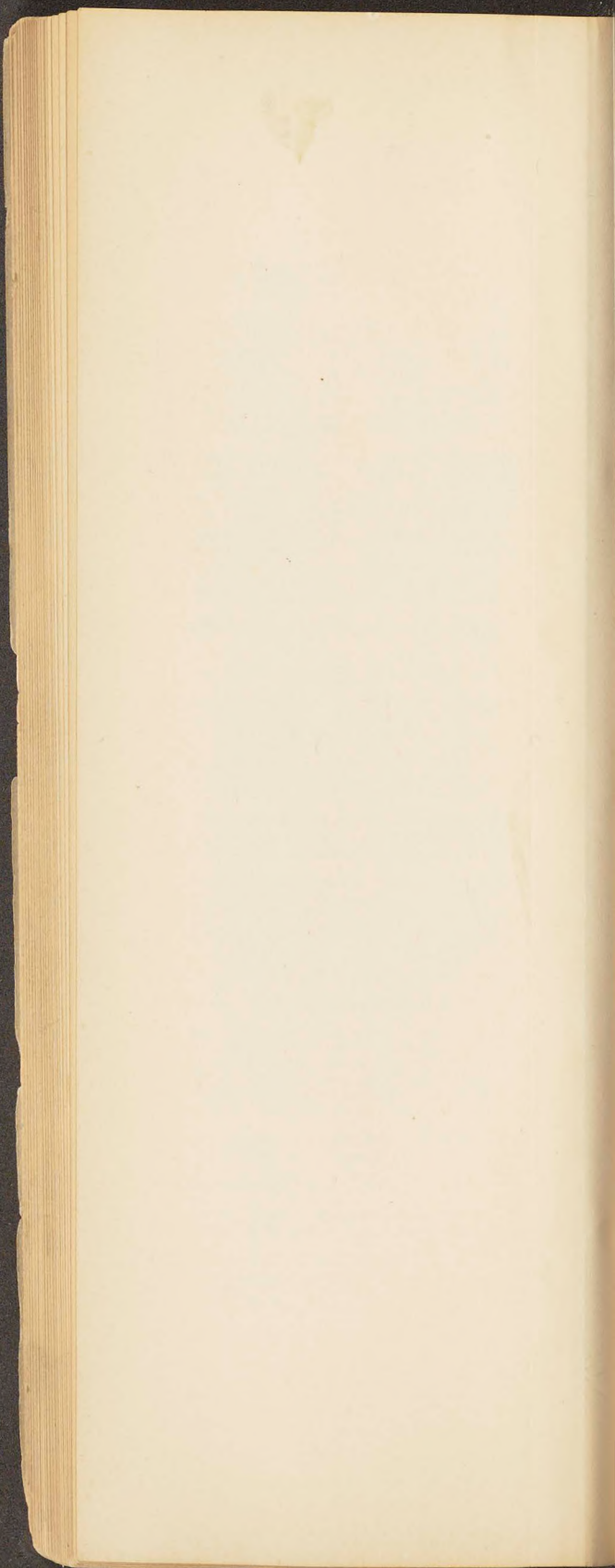
Color.	Streak or Lustre.	Cleavage or Fracture	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
13-2	2		2-5	4.82		IV.
2	2	D	4.5	5	6	V.
13-2	8			9.3		M.
5						M.
3-2	3	U. S.	5-6	4.14		
7, 8, 6, 4	72, 31		6.5-7	3.4		IV.
21-3, 8, 2	sub. 73	E	5-5.5	4.3		IV.
12-7	3, 8	E	4	4.3		IV.
8	5	U. S. G.	5-5.5	3.6-4		M.
8, 3	78 or 79		2.5			
1, 8, 3	66			2.55		
3, 8	78, 70, 66	78, 73	3.5-4.5	4-5		A.M.
1, 7, 4	31	D	2.5	2.35		III.
1 to 15	31	D	2.5			
1-5-3	66		2.5-3	2.3		III.
8	5	U. S. G.	5-5.5	3.6-4		M.
1	31	D	2	2.04		III.
19, 6	79		2.5	2.49		
5						VI.
5 to 3	78, 5		2.5-3	3.9-4.20		A.
2	2, 8		5-6	3.7-4.7		A.
7, 66, 2	66					A.
2, 3, 8			3	D		A.
2	66		2-2.5	3.1-3.3		
6, 2	66		3	3.2-3.6		
2	73, 78		1	2.8	3	A.
1	79		1.5	3.69	V, S.	I.
1	71	B.	2-2.5	5.22	V, S.	I.
1	71	F.	2.5-3	5.56	V, S.	IV.
1	31	E.	2.5	3.8		IV.
4, 5, 7, 1	71, 77, 66			4.3611	1	M.
11, 7	73	ct.	2	6.60	1	M.
24, 66, 5	79, 77		1-2	4.5	1	IV.
6, 2						A.
5	66					A.
5, 4, 5	24, 5			3.80		
27-3	71	D	1.5	4.5	1.8	V.
5	66		3	3.2-3.6		M.
5-3 to 1	31		4-5.5	5.28		M.
1	65	Q		6.6		M.
1-5						
8	72					III.
{ 23, 1, 66 }	72	Z	7	2.6		
{ 5, 3, - }				2.2-2.3		VI.
		F	5.5	2.245		III.
{ 23, 64, 1 }	72		6-6.5	2-2.3		A.
{ 5, 8, 3 }				2.6		
1				3.1-3.3	6	III.
7, 1, 5, 4, 8	31 to 72	Z	5.5			III.
23				3.39	5	IV.
8, 4-2	80	93.0	5-6			III.
3, 4 to 7	31	F		9	4.5	V.
1-7	72	D	4.5-5			
1, 71, 5			6-7	2.584		
			5-6	3.2-3.3		IV.
21, 58, 6	9		6	3.233		M.
4, 2	72, 21, 4	W	5.5-6	3.45-3.58	E	IV.
{ 23, 1, 7 }						
{ 8, 4, 2 }	72	870 & 930	5.5-6	3.2-3.3	2.5-5	V.
3-8 to 2-4	72	930	6	3.4	2	V.
53-3 8-3	72	W	5.5-6.5	3.61	2.5	VI.
21, 4, 2					2.7	
1-7, 4-9	31	E	6.5	3.18	3.5	V.
1-7-9	78	D	6.5	2.45	3.5	V.
37, 4	72	W	5.5	3.08		IV.
8, 7, 4	79	F	5.5	3.2	6	IV.
87, 71	Res	W	6.5	3.421		
{ 2, 3, 1, 7, }						
{ 8, 4, 23 }	72	870, 930	5-5.6	3.2-3.5	2.5-5	V.
35, 4			5	2.957		
23, 22, 1, 8			5-5.5	2.97		
48, 63, 3	72	A	5-5.5	3.433		IV.
83, 4		H	2	2.845		M.
2	72	W, at 1230	6	3.4	2	V.
4 to 49, 6	79	U	4	3.2		E.
2	66	Z		3.03		M.
6, 7	72, 31	F	5.5	3.103-3.113	E	III.
7, 2	70		2.5	2.58	2.5	

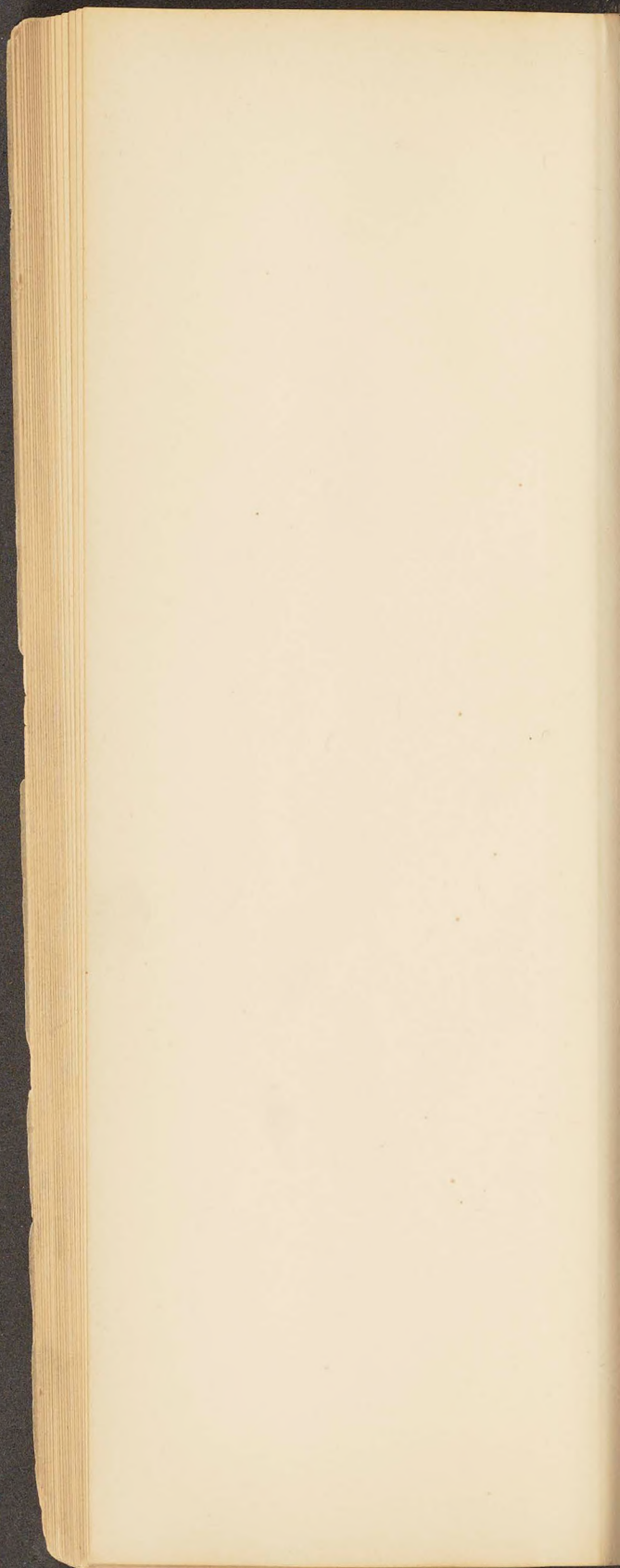




Species No.	SPECIES.	Page in Dana.	COMPOSITION.
253	Tachylyte.....	245...	Fe, Mg, Ca, Na, Al, Si, H
253	A. Hyalomelan.....	245...	3 R O, Al O ₃ 4½ Si O ₂ ?
254	Beryl.....	245...	(½ Be ³ O + ¼ Al O ₃) 3 Si O ₂
255	Eudialyte.....	248...	(¾ (Ca, Na, Fe) ² + ¼ Zr) ² Si
256	Pollucite.....	249...	(R ³ O Al O ₃) 3 Si O ₂ + ½ H
257	Forsterite.....	255...	2 Mg O Si O ₂
258	Monticellite.....	255...	(½ Ca O + ½ Mg O) ² Si O ₂
259	Chrysolite.....	256...	(Mg O, Fe O) ² Si O ₂
259	A. Horton lite.....	Ap. 1-7	(Fe O, Mg O Mn O) ² Si O ₂
260	Fayalite.....	258...	2 Fe O Si O ₂
261	Iron Manganese Chry- [solite]	259...	R O R O ₃ Si ² O ₂
261	A. Roepperite.....	Ap 1-13	(Fe, Mn, Zn, Mg) ² Si.....
262	Tephroite.....	259...	Mn ² O, Si O ₂
262	A. Hydrotaphroite.....	260...	(Mn O, Mg O) ² Si ₂ O + ¾ H
263	Knebelite.....	260...	(Fe O Mn O) ² Si O ₂
264	Leucophanite.....	260...	Ca O, Na O, Be O Si O ₂ , Fl
265	Wöhlerite.....	261...	Ca O Na O Zr O ₂ Cb O ₅ Si O ₂
266	Willemite.....	262...	Zn ² O Si O ₂
267	Phenacite.....	263...	Be ² O Si O ₂
268	Meliphanite.....	263...	R O R O ₃ Si O ₂
269	Garnet.....	265...	(¾ 3 Fe O ₃ + ¼ Al O ₃) ² Si ³ O ₂
270	Danalite.....	265...	{ (¼ (Zn Fe, Mn) + ¼ Be) ³ Si O ₂ + ⅓ Zn S..... }
271	Helvite.....	264...	{ ½ (Mn, Fe) + ½ Be ² Si + ⅓ Mn S..... }
272	Zircon.....	272...	Zr O ₂ Si O ₂
272	A. Malacon.....	275...	
272	B. Cyrtolite.....	275...	
272	C. Tachyaphaltite.....	275...	
272	D. Ørstedite.....	275...	
272	E. Auerbachite.....	276...	
272	F. Bragite.....	276, 525	R O, R O ₃ , + Cb O ₅ , Y O.
273	Vesuvianite.....	276...	(¾ Ca ³ + ¾ (Al, Fe) ² Si ³
274	Melilite.....	280...	Ca Mg Na Al Fe Si O.....
275	Sphenoclase.....	280...	Si ₂ O Al O ₃ Fe O Mn O Mg O Ca O
276	Epidote.....	281...	(⅓ Ca ³ + ⅓ (Al, Fe) ² Si ³
276	A. Koelbingite.....	284...	R O Si O ₂
277	Piedmontite.....	285...	Ca Fe Al Si O
278	Allanite.....	285...	Al, Ce, La, Di, Fe, Ca, Si.
279	Muromontite.....	289...	R O ₃ , Si O ₂ , Y O.
279	A. Bodenite.....	289...	R O R O ₃ Ce O.
279	B. Michaelsonite.....	289...	R O, R O ₃ , Si O ₂ La O.....
280	Zoisite.....	290...	{ (⅓ Ca ³ + ⅓ (Al, Fe) ²) Si ³ O ₂ }
280	A. Jadeite.....	292...	R O, R O ₃ , Si O ₂
281	Partschinite.....	293...	R O, R O ₃ , Si O ₂
282	Gadolinite.....	293...	Y O, Ce O, Fe O, Be O, Si O.
283	Mosandrite.....	295...	Ge O ₃ Ca O Na O Ti O ₂ Si O ₂ H
284	Ilvaite.....	296...	Fe O Fe O ₃ Ca O Mn O Si O
284	A. Ardenneite.....	Ap 2-4	R O ₃ , R O, Si O ₂ , V O ₅
285	Axinite.....	297...	Al Mn, Fe, Ca, Si, B.....
286	Danburite.....	299...	Ca ² O Si O ₂ + B ² O ₃ Si ₃ O ₂
287	Iolite.....	299...	2 (Mg Fe) Si + Al ² Si ³
288	Phlogopite.....	302...	⅓ (Mg R) ³ + ⅓ Al ² Si ³
288	A. Aspidolite.....	Ap. 1-2	R O R O ₃ Si O ₂
289	Biotite.....	304...	{ (½ Mg O, K O) ³ + ½ (Al O ₃ , Fe O ₃) ² 3 Si O ₂ }
290	Lepidomelane.....	307...	K Mg Al Fe Si O.....
290	A. Mauganophyllite.....	Ap 2-36	R O R O ₃ + Si O ₂
291	Annite.....	303...	R O R O ₃ Si O ₂
292	Astrophyllite.....	308...	{ Al O ₃ , Fe O ₃ , Mn O, Mg O, Fe O, Na O, K O, Ti O ₂ Si O ₂ }
293	Muscovite.....	309...	Al O ³ Fe O ³ K O Na O Si O ₂ H
294	Lepidolite.....	314...	Al O ₃ Fe O K O Li O Si O ₂ H
295	Cryophyllite.....	316...	Al O ₃ Fe O K O Li O Si O ₂ H
295	A. Snarumite.....	316...	Si O ₂ Al O ₃ Si O Na O K O
296	Sarcolite.....	317...	R O R O ₃ Li O ₂
297	Meionite.....	318...	(⅓ (Ca, Na) ³ + ⅓ Al ² Si ³

Color	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
7, 51, 2...	72		6.5	2.6	2.5	
7, 51, 2...	72		6.5	2.71	E	
23, 9, 6, 5, 4	72		7.5-8	2.6-2.7	5.5	III.
53 to 8 3...	72	D	5.5	2.9	2.5	III.
23	72, 75	A	6.5	2.901	6	I.
1. 7	72	E	6-7	3.2-3.3		IV.
1-7	72	E	5-5.5	3-3.2	6	IV.
34, 4	72	E	7	3.3-3.5		IV.
5, 2	22, 1	E	6.5	3.9	4	IV.
2	8	E	6.5	4.1	3	IV.
2	8	E	6.5	4.1	3	
21, 4 to 2	72	V	6	4	Diff	IV.
3, 8, 47, 7	72		6	4	3.5	IV.
19, 3	23		4			
7, 3, 8, 2			6.5	4.12	E	IV.
4-1	72	D	3.5-4	2.97	3	IV.
5, 8	72	E	5.5	3.41	3	IV.
23, 8, 5, 3, 4	72, 70		5.5	3.9-4.2	3.5-5	III.
23, 5, 8	72	Z	7.5-8	3		III.
5	72	F	5	3.0	E	VI.
3 or 8, 3	72		7-7.5	3.7-4	3	I.
48, 3, 7	72		5.5-6	3.43	E	I.
59 or 45, 5	70		6-6.5	3.2	3	I.
23, 3, 7, 8	71		7.5	4.4-4.6		II.
8, 3, 8	72 sub 72		6.5	3.9-4.074		
8, 3	71		5-5.5	3.98-4.04		
8, 3	sb 73 to 72					
8, 3	71, 81		5.5	3.629		
8, 7	78 72		6.5	4.06		
8	5, 8		6-6.5	5.13-5.35		II.
8, 4, 5, 6	72		6.5	3.3-3.4	3	II.
1, 5, 8	72	D	5	2.95	3	II.
19, 7, 5			5-5.6	3.2	3	M.
7, 39, 4, 8, 5	72	2 cleav	6.7	3.2-3.5	3-3.5	V.
4 to 2	72, 39, 4		5.5-6	3.599		IV.
27, 3, 3-8	E	72	6.5	3.4	3	V.
8, 2	7		5.5-6	3.42	2.5	V.
2 or 4, 2	72		7	4.26		A.
72			4-5	3.44		M.
1, 47, 7	72	E	6-6.5	3-3.3	3-3.5	IV.
43, 4, 1	31		6.5-7	3.33-3.35	E	M.
5, 3	78	sub. Z	6.5-7	4.006		IV.
2, 4 to 2	72		6.5-7	4-4.5		IV.
3, 8	70	E	4	2.95	3	IV.
2	2		2.5-6	3.8-4	2.5	IV.
63, 8 to 31, 7	72		6.5-7.5	3.27	2	VI.
19, 5	72		7	2.9	3	VI.
6	72		7	2.6	5-5.5	IV.
5, 3, 1	31	L	2.5	2.8	5	IV.
34, 4	21	L	1-2	2.72	6	III.
4, 2	81	L	2.5	3	6	III.
21, 4 to 2	72	Mi	3	3	E	III?
15 to 10, 3	19, 3		3	3.169		VI.
2	21, 4		3	3.169		
15, 5	31	Mi	3	3.32	E	IV.
7, 1, 8, 4	31	Mi	2.5	2.8-3	5.1	IV.
53, 3 and 7, 1	72	Mi	2.5-3	2.8-3	2-2.5	IV.
2, 4 to 8, 3	31	Mi	2.5	2.91	1.5-2	IV.
3, 1, 23, 7			4-5.5	2.826		M.
3, 53	72	F	6	2.545	E	II.
23 to 1	72		5.5	2.7	3	II.

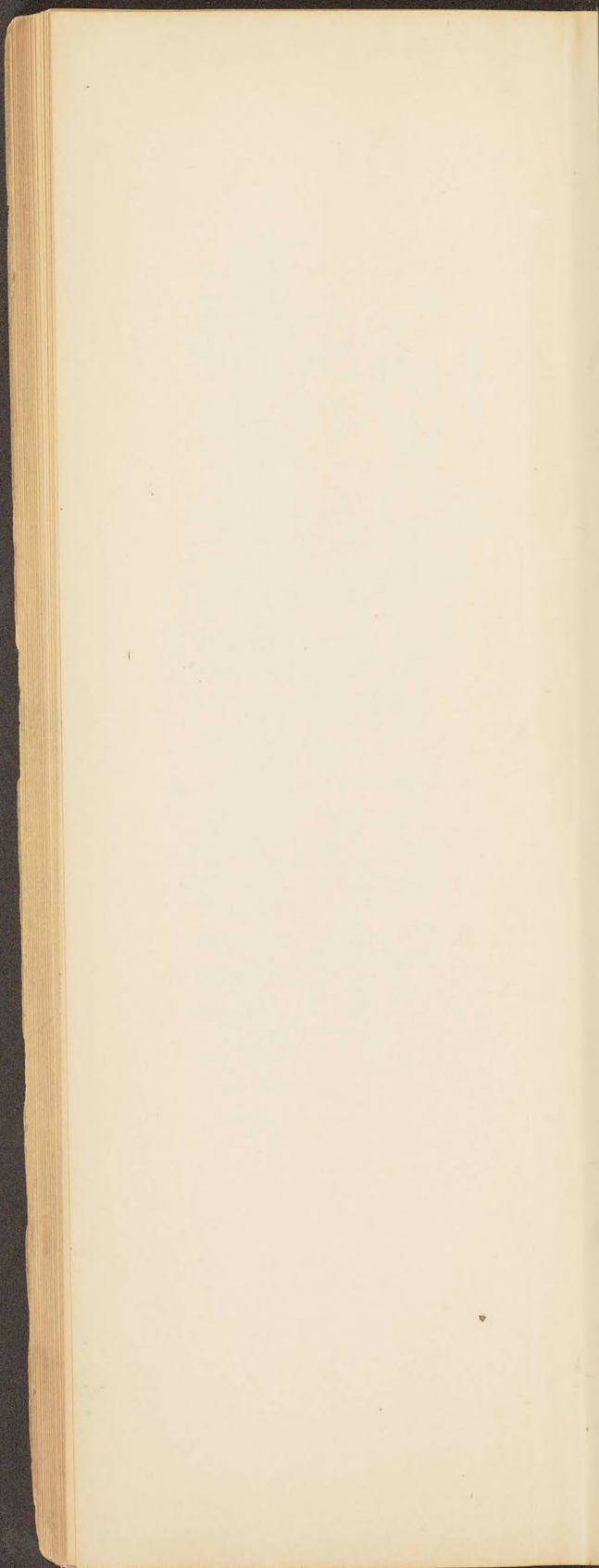




Species No.	SPECIES.	Pages in Dana.	COMPOSITION.
293	Paranthite.....	318...	$(\frac{1}{4} \text{CaO}^3 + \frac{3}{4} \text{AlO}_3) 2\text{Si}^3\text{O}_2$
299	Wernerite.....	319...	$\text{AlO}_3 \text{FeO}_3 \text{CaO} \text{NaO} \text{KO} \text{SiO}_2$
300	Ekebergite.....	324...	$\{ \frac{1}{3} (\text{CaO} \text{NaO}) + \frac{2}{3} \text{Al} \}$
301	Mizzonite.....	325...	$\text{O}_3 2\text{Li}^3 \text{O}_2 + 3 \text{SiO}_2$
302	Dipyre.....	326...	Ca Na Al SiO_2
303	Marialite.....	326...	Ca Na Al SiO_2
304	Nephelite.....	327...	$\text{NaO, KO, AlO}_3 \text{FeO}_3, \text{SiO}_2$
304	A. Cancrinite.....	329...	$\text{AlO}_3, \text{CaO, NaO, CO}_2, \text{SiO}_2$
305	Sodalite.....	330...	$\{ \frac{1}{2} \text{Na}^2 \text{O} + \frac{3}{4} \text{AlO}_3 \}$
305	A. Microsommite.....	Ap 2-39	$\text{Si}^3 \text{O}_2 + \frac{1}{2} \text{NaCl}$
306	Lapis-Lazuli.....	331...	$\text{R O R O}_3 \text{SiO}_2$
307	Hautynite.....	332...	$\text{Ca NaO AlO}_3 \text{FeO}_3 \text{SO SiO}_2$
308	Nosite.....	333...	$\{ \frac{1}{4} \text{Na}^3 \text{O} + \frac{3}{4} \text{AlO}_3 \}$
309	Leucite.....	334...	$\text{Si}^3 \text{O}_2 + \text{CaO S O}_3$
309	A. Maskelynite.....	Ap 2-37	$\{ \frac{1}{4} \text{Na}^3 \text{O} + \frac{3}{4} \text{AlO}_3 \}$
310	Anorthite.....	337...	$\text{Si}^3 \text{O} + \frac{1}{2} \text{NaO S O}_3$
310	A. Cyclopite.....	340...	$\text{K O SiO}_2 + \text{AlO}_3 \text{Si}^3 \text{O}_2$
310	B. Barsowite.....	340...	$\text{SiO}_2, \text{AlO}_3, \text{CaO, NaO, K}$
310	C. Bytownite.....	340...	$\text{CaO SiO}_2 + \text{AlO}_3 \text{SiO}_2$
311	Labradorite.....	341...	$\text{R O R O}_3 \text{SiO}_2$
312	Andesite.....	344...	$\text{Ca, Mg, AlO}_3, \text{FeO}_3, \text{SiO}_2$
313	Hyalophane.....	346...	$\text{SiO}_2, \text{AlO}_3, \text{MgO, CaO}$
314	Oligoclase.....	346...	$\text{SiO}_2, \text{AlO}_3, \text{MgO, CaO}$
314	A. Tschermakite.....	Ap 2-51	$(\text{CaO NaO}) \text{SiO}_2 + \text{AlO}_3 \text{Si}^3 \text{O}_2$
315	Albite.....	348...	$\{ \frac{1}{4} (\text{CaO, NaO})^3 + \frac{3}{4} \}$
316	Orthoclase.....	352...	$\text{AlO}_3, 2\text{Si}^3 \text{O}_2 + 3 \text{SiO}_2$
317	.....	.....	$\text{K O, Ba O AlO}_3, \text{SiO}_2$
318	.....	.....	$\text{Na O, Ca O, AlO}_3, \text{SiO}_2$
319	Chondrodite.....	353...	$3 \text{R O SiO}_2 + \text{AlO}_3 \text{SiO}_2$
320	Tourmaline.....	365...	$\text{Na O, AlO}_3, \text{SiO}_2$
321	Gehlenite.....	370...	$\{ \frac{1}{2} (\text{CaO, MgO})^3 + \frac{1}{2} \}$
322	Andalusite.....	371...	$(\text{AlO}_3 \text{FeO}_3) \text{SiO}_2$
322	A. Myelin.....	373...	$\text{AlO}_3, \text{SiO}_2$
323	Fibrolite.....	373...	$\text{AlO}_3, \text{SiO}_2$
323	A. Westanite.....	Ap 1-16	$\text{SiO}_2, \text{AlO}_3 \text{PO}_5, \text{FeO}_3, \text{H}$
224	Cyanite.....	375...	$\text{AlO}_3, \text{SiO}_2$
325	Topaz.....	376...	$\text{AlO}_3, \text{SiO}_2, \text{Fl}$
326	Euclase.....	379...	$(\frac{1}{6} \text{H}^3 + \frac{2}{6} \text{Be}^3 + \frac{3}{6} \text{Al}) \text{Si}$
327	Datolite.....	380...	$(\text{Ca}^3 \text{O, H}^3, \text{B O}_3) \text{SiO}_2$
328	Guarinite.....	383...	$(\text{CaO} + \text{TiO}_2) \text{SiO}_2$
330	Grothite.....	386...	$\text{R O, R O}_3, \text{TiO}_2, \text{SiO}_2$
331	Keilhauite.....	387...	$\text{CaO YO FeO}_3 \text{AlO}_3 \text{TiO}_2 \text{SiO}_2$
332	Tscheffkinite.....	387...	$\text{CeO, FeO, TiO}_2, \text{SiO}_2$
333	Staurolite.....	388...	$\text{AlO}_3 \text{FeO}_3 \text{FeO MgO SiO}_2$
334	Schorlomite.....	390...	$\text{FeO}_3, \text{CaO, TiO}_2, \text{SiO}_2$
335	Sapphirine.....	391...	$3 \text{MgO} + 4 \text{AlO}_2 + \frac{1}{2} \text{SiO}_2$
335	A. Trautwinit.....	Ap. 2-56	$\text{R O, R O}_3, \text{SiO}_2$
336	Eulytite.....	391...	$\text{Bi}^2 \text{O}_3 \text{Si}^3 \text{O}_2$
336	A. Agricolite.....	Ap. 2-1	$\text{Bi}^2 \text{O}_3 \text{Si}^3 \text{O}_2$
337	Atelestite.....	392...	Bi
338	Hypochlorite.....	392...	$\text{SiO}_2 \text{AlO}_3 \text{BiO}_3 \text{FeO PO}_5 \text{Mn}$
338	Isopyre.....	392...	$\text{SiO}_2, \text{AlO}_3, \text{FeO}_3, \text{CaO, CuO}$
339	Pectolite.....	396...	$(\frac{1}{6} \text{Ca} + \frac{1}{6} \text{Na} + \frac{1}{6} \text{H}) \text{Si}$
340	Xonaltite.....	397...	$4 \text{CaO, SiO}_2 + \text{H O}$
340	A. Plombierite.....	802...	$\text{CaO, SiO}_2 + 2 \text{H O}$
341	Okenite.....	398...	$(\frac{1}{3} \text{H O} + \frac{1}{3} \text{CaO}) \text{SiO}_2 + \frac{1}{3} \text{H}$
341	A. Centrallassite.....	793...	$\text{R O, R O}_2 \text{SiO}_2$
341	B. Cyanolite.....	797...	"
342	Gyrolite.....	398...	$(\frac{2}{3} \text{CaO} + \frac{1}{3} \text{H}) \text{SiO}_2 + \text{H}$
343	Laumontite.....	399...	$\text{CaO, AlO}_3, \text{Si}^4 \text{O}_2, \text{H}^4$
343	A. Leonhardite.....	401...	$\text{SiO}_2, \text{AlO}_3, \text{CaO, H}$
344	Catapleiite.....	401...	$\text{ZrO}_2, \text{NaO, CaO, SiO}_2, \text{H}$
345	Diopase.....	401...	$\text{CuO SiO}_2 + \text{H}$
345	Chrysocolla.....	402...	$\text{CuO, SiO}_2 + 2 \text{H}$
346	A. Cyanochalcite.....	Ap. 1-4	$\text{SiO}_2, \text{PO}_5 \text{CuO, H}$
346	B. Resanite.....	Ap. 2-48	$\text{H}^2 \text{O Si}^3 \text{O}_2 + 9 \text{aq}$
347	Alipite.....	401...	$(\frac{1}{3} \text{H} + \frac{2}{3} (\text{NiO, MgO})) \text{SiO}_2$
348	Conarite.....	405...	$(\frac{1}{3} \text{H} + \frac{2}{3} \text{NiO}) \text{SiO}_2 + \frac{2}{3} \text{H}$
349	Picrosmine.....	405...	$\text{MgO SiO}_2 + \frac{1}{2} \text{H}$
349	A. Hydrosilicite.....	793...	$\text{R O SiO}_2 + \text{H}$
350	Spadaite.....	405...	$(\frac{5}{6} \text{Mg} + \frac{1}{6} \text{H}) \text{SiO}_2 + \frac{1}{6} \text{H}$
351	Pyrallolite.....	406...	$\text{Pyroxene altering into}$
352	Pycrophyll.....	406...	Steatite

S' AGENCY CATALOGUE.

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
1, 7, 19, 4	31, 72	Mass	5.5	2.736	E	II.
1, 7, 6, 4, 2	72 to 78	E	5-6	2.6-2.8	2.5	II.
1, 7, 4, 6, 3	1 72	E	5.5-6	2.74	E	IV.
23 to 1	72		5.5-6	2.623	E	II.
23, 1, 4, 3	72, 31		5-5.5	2.646	E	IV.
23 or 1	72		5.5-6	5.626	E	I.
5 and 4, 3	72 to 78	Y	5.5-6	2.6	3.5	III
1, 9, 7, 5	72	Y	5-6	2.5	2.5	III
7, 4, 6, 5, 1	72		5.5-6	2.3	3.5-4	I.
23			6	2.60		
33, 6	72		5-5.5	2.4	3	I.
4 to 6	72	N	5.5-6	2.5	4.5	I.
7 to 2	72		5.5	2.3	4.5	I.
1, 7	72		5.5	2.4		I.
23, 1, 7	72	2=Clvs	6.5	2.7	4.5	VI.
1			6			V.
1	72	C	5.5-6	2.75	4	VI.
60, 1	31		5.5-6	2.74	5	M.
1, 7, 8, 4	72	{ Angle 94°	6	2.7	3.5	VI.
1, 7, 4, 5, 3	sub 72, 31	H	5-6	2.61-2.74	5	V.
1, 48, 3	72	2 Clvs	6	2.9	5	V.
1, 48, 3	72	93°	6	2.6-2.7	3.5	VI.
7 to 1	72		6	2.64		M.
23 to 1, 7, 6, 4	72	93° 30'	6	2.6	4	VI.
{ 23 to 1, } { 48, 3, 7, 4 }	72	{ Right Angle	6	2.5-2.6	5	V.
1, 3, 5, 8, 4	72, 70		6.5	3.2		IV.
2, 8, 4, 6, 9, 1	72		6.5-7.5	2.9-3.3	3-5	III
7, 1	70		5.5-6	3	5.7	II.
1, 7, 5, 3	72	E	7.5	3.2		IV.
5, 3, 1	66		2	2.5		
1, 8, 4, 3	72	E	6-7	3.2		V.
57, 3			2.5			M.
6, 1, 7, 4, 2	72, 31	E	5.7	3.6		VI.
23, 1, 6, 4, 5	72	D	8	3.5		IV.
38, 4, 6, 1	72	E	7.5	3.1	5.5	V.
23, 1, 4, 5, 3	72		5.5	3	2	V.
45, 5	72	E	6	3.43	3	VI.
63 to 2, 8	72 to 78	ct	6.5	3.52-3.60		IV?
8, 2	70		6.5	3.7	3	IV.
2	72		5-5.5	4.5	E	
8, 3, 2	72		7	3.6	- E?	IV.
2			7-7.5	3.8	3	
19, 6, 4	72		7-8	3.42-3.48		III?
4	66-7		1-2		E	
21, 55 to 5	70		4.5	6.1	E	
8, 23, 5		F	soft			IV.
24, 5	71, 78		5			M.
4	72, 4	F. Z	6	2.9-3.4		
7 or 2	72, 4, 7	F	6-6.5	2.9-3	E	M.
1 to 7	70	U	5	2.7	2	V.
1 to 7				2.71		
1			soft			
1	31	U	4.5-5	2.3	E	IV.
1 or 5	31		3.5	2.45	E	M.
6, 7			4.5	2.495	F	A.
1	72, 31		3-4		E	M.
1, 7, 3	31	E	3.5	2.3	E	V.
1, 5, 8	31, 72	W	3-3.5	2.25	E	IV.
5, 8	72	E	6	2.8	3	III.
37, 4	72	I	5	3.3		III.
6 to 4	72		2-4	2.2		
33, 6	74 to 66	S	4.5	2.79		M.
34, 4			2.06			
43, 4			2.5	1.44-1.46		M.
6, 34, 4		W	2.5-3	2.459-2.619		IV?
5-34	4		2.5-3	2.66		III.
						A.
3	31, 78	J. Z	2.5		E	M.



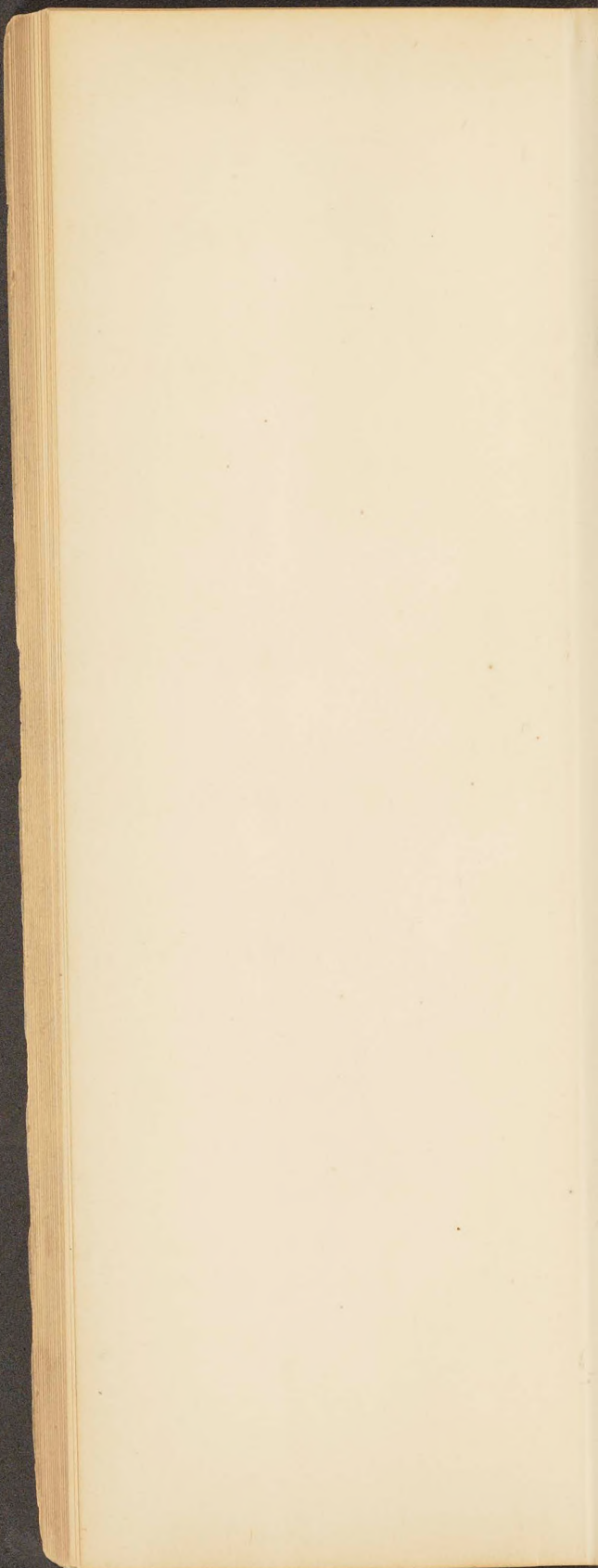
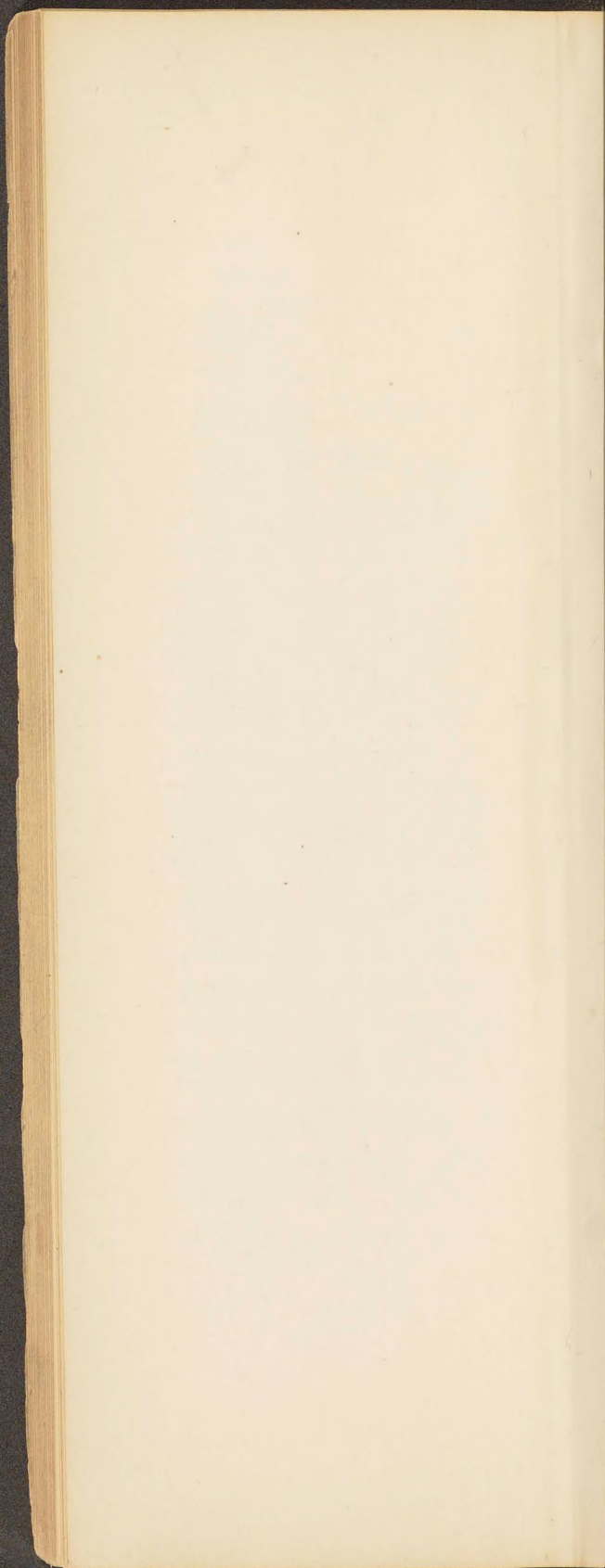
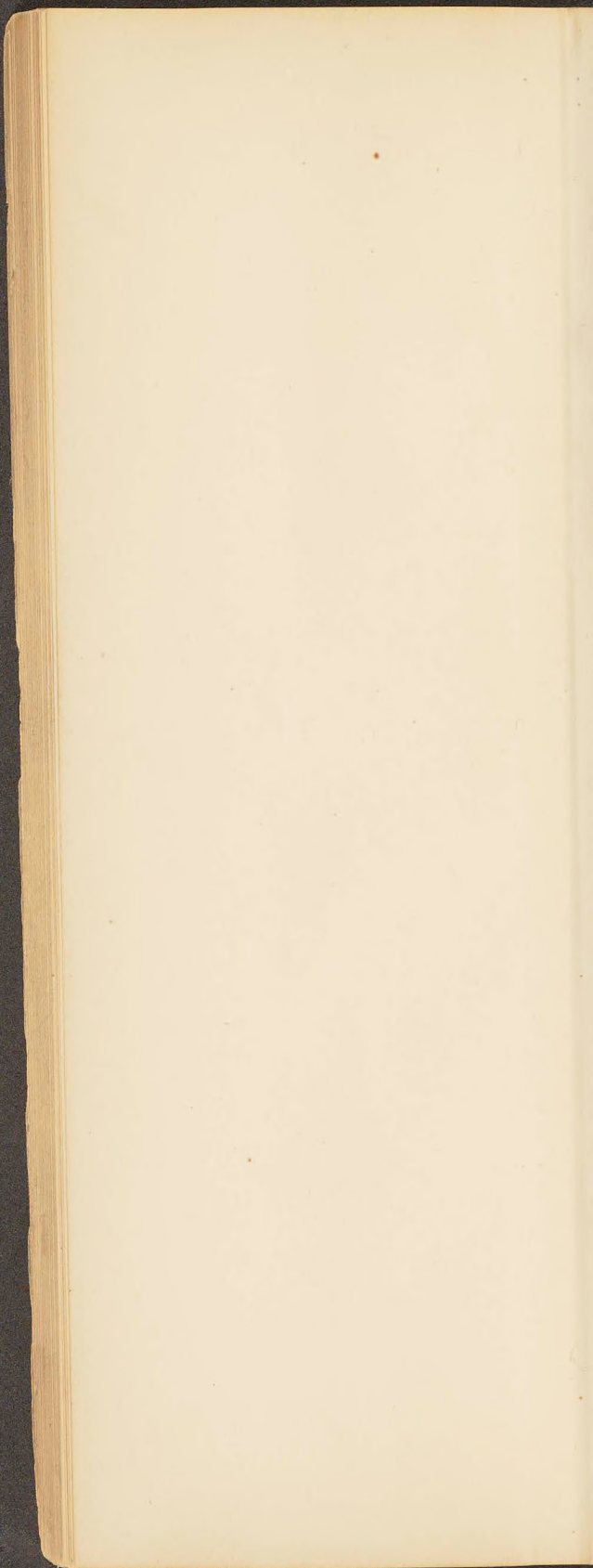


TABLE OF MINERALS

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
353	Traversellite.....	406...	} Pyroxene altering into steatite.....
354	Pitkarandite.....	406...	
355	Strakonitzite.....	406...	
356	Monradite.....	406...	Mg O, Fe O, Si O ₂ , H.....
357	Neolite.....	406...	Mg O, Al O ₃ , Si O ₂ , H.....
358	Paligorskite.....	406...	R O, R ₃ , Si O ₂ , H.....
359	Xylotile.....	4 6...	Fe O ₃ , Mg O, H, Si O ₂
360	Anthosiderite.....	407...	Fe ² O ₃ , Si ² O ₂ +2 H.....
361	Calamine.....	407...	Zn ² O Si O ₂ +H.....
362	Villarsite.....	409...	($\frac{1}{2}$ Mg + $\frac{1}{2}$ Fe) ² Si + $\frac{1}{2}$ H.....
362	A. Moresnetite.....	409...	Si O ₂ , Al O ₃ , Zn O, Ni O.....
363	Prehnite.....	410...	Ca, ³ (Al, Fe), Si ⁶ , H ⁵
363	A. Uigite.....	412...	R O, R O ₃ , Si O ₂
364	Chlorastrolite.....	412...	R O, R O ₃ , Si C ₂
365	Tritomite.....	412...	
366	Thorite.....	413...	Th O ₂ , Si O ₂ +1 $\frac{1}{2}$ H.....
367	Cerite.....	413...	(CeO, LaO, BiO) ² Si O ₂ +H.....
368	Erdmannite.....	414...	R O, R O ₃ , Si O ₂ , La.....
369	Pyrosmalite.....	414...	Mn O, Fe O, Si O ₂ , Cl, H.....
370	Apophyllite.....	415...	($\frac{1}{2}$ Ca, K) + $\frac{1}{2}$ H) ² Si + H Si ²
370	A. Chalcophosphate.....	Ap. 2-11	Si O ₂ , Al O ₃ , Ca O, H, CO ₂
371	Edingtonite.....	417...	Al O ₃ , Ba O, Si O ₂ , H.....
372	Gismondite.....	418...	Al O ₃ , Ca O, K O, Si O ₂ , H.....
373	Carpholite.....	419...	(Al, Fe, Mn) ² Si ³ +3 H.....
374	Allophane.....	419...	Al O ₃ , Si O ₂ +6 H.....
375	Collyrite.....	420...	Al ² O ₃ , Si O ₂ +9 H.....
375	A. Dillnite.....	421...	Al ⁴ O ₃ Si ³ O ₂ +9 H.....
376	Schrötterite.....	421...	Al ⁸ O ₃ Si ³ O ₂ +30 H.....
376	A. Scarbroite.....	421...	Si O ₂ , Al O ₃ , H.....
376	B. Uranophane.....	805...	($\frac{1}{6}$ R ³ + $\frac{5}{6}$ R) Si + 3 H.....
377	Thomsonite.....	424...	(Ca Na), Al, 2 Si, 2 $\frac{1}{2}$ H.....
377	A. Rauite.....	Ap. 2-47	R O, R O ₃ , Si O ₂ , H.....
378	Natrolite.....	426...	Na O, Al O ₃ , Si ³ O ₂ , H ²
379	Scolecite.....	428...	Ca O, Al O ₃ , Si ³ O ₂ , H ³
380	Ellagite.....	430...	R O, R O ₂ , Si O ₂ , H.....
381	Mesolite.....	430...	(CaO NaO) Al ³ O ₃ , SiO ₂ , 3 H.....
382	Levynite.....	431...	3 Si, Al, (Ca, Na, K), 4 H.....
383	Analcite.....	432...	Al O ₃ , Na O, Si ⁴ O ₂ , H ²
384	Eudnophite.....	433...	Si O ₂ , Al O ₃ , Na O, H.....
385	Faujasite.....	433...	4 $\frac{1}{2}$ Si, Al ($\frac{1}{2}$ Ca + $\frac{1}{2}$ Na), 9 H.....
386	Chabazite.....	434...	4 Si Al, ($\frac{4}{3}$ Ca + $\frac{1}{3}$ Na K) 6 H.....
387	Gmelinite.....	436...	4 Si, Al, $\frac{1}{2}$ Ca + $\frac{1}{2}$ (Na, K) 6 H.....
388	Herschelite.....	437...	{ 4 Si O ₂ , Al O ₃ ($\frac{3}{4}$ Na O) + $\frac{1}{4}$ K O), 5 H..... }
389	Phillipsite.....	438...	(Ca, K), Al O ₃ , 4 Si O ₂ , 3 H.....
390	Harmotome.....	439...	Ba O, Al O ₃ , Si ⁵ O ₂ , H ⁵
391	Hypostilbite.....	441...	(Na, Ca) Al, 4 $\frac{1}{2}$ Si, H ⁶
392	Stilbite.....	442...	Ca O, Al O ₃ , Si ⁵ O ₂ , H ⁶
393	Epistilbite.....	443...	6 Si, Al, ($\frac{4}{3}$ Ca + $\frac{1}{3}$ Na) 5 H.....
393	A. Reissite.....	Ap 1-14	R O, R O ₃ , Li O ₂ , H.....
394	Heulandite.....	444...	Ca O, Al O ₃ , Si ⁶ O ₂ , H ⁵
395	Brewsterite.....	445...	Al O ₃ $\frac{2}{3}$ Sr + $\frac{1}{3}$ Ba) Si ⁶ H ⁵
396	Mordenite.....	446...	(Na, Ca), Al, Si ⁹ , H ⁶
397	Sloanite.....	446...	R O, R O ₂ , Li O ₂ , H.....
398	Saspachite.....	447...	R O, R O ₂ , Li ₂ , H.....
400	Talc.....	451...	Mg O, Si ⁵ O ₂ +2 H.....
400	A. Talcoid.....	454...	Li O ₂ , Mg O, Fe O ₂ , H.....
401	Pyrophyllite.....	454...	Al O ₃ , Si ³ O ₂ +H.....
401	A. Pihlrite.....	455...	(R ³ O, Al O ₃) Si ³ O ₂
402	Sepiolite.....	456...	Mg ² O Si ³ O ₂ +2 H.....
403	Aphrodite.....	457...	Mg O Si O ₂ + $\frac{3}{4}$ H.....
404	Cimolite.....	457...	Al ² O ₃ Si ⁹ O ₂ +3 H.....
404	A. Sphragidite.....	458...	R O, R O ₃ , Si O ₂ , H.....
404	B. Ehrenbergit.....	458...	R O, R O ₃ , Si O ₂ , H.....
404	C. Anauxite.....	458...	Al O ₃ , Si O ₂ , H.....
404	D. Portite.....	458...	Al O ₃ Si ³ O ₂ +2 H.....
404	E. Nefedieffite.....	Ap 2-41	H ₆ Mg Al ₂ Si ₅ O ₁₇
405	Smectite.....	458...	($\frac{1}{2}$ Al + $\frac{1}{2}$ H ³) Si ³ +4 $\frac{1}{2}$ H.....

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
.....						
.....5.....	72	.....	6.....	3.7.....	.....	M.....
.....4.....	73.....	.....	1-2.....	2.77.....	.....	F.....
.....1.....	.....	K.....	.....	2.217.....	.....	.....
.....52, 8.....	73.....	U.....	.....	2.4.....	E.....	.....
.....41, 5, 5, 8.....	73.....	K.....	6.5.....	3.....	5.5.....	.....
.....23, 1, 5, 4, 6.....	72.....	E.....	4-4.5.....	3.5.....	6.....	IV.....
.....4.....	.....	.....	4-5.....	2.978.....	.....	III.....
.....1.....	.....	Z.....	2.5.....	.....	.....	D.....
43 to 62, 4, 1.....	72.....	D.....	6.-6.5.....	2.9.....	2.....	IV.....
.....1, 6.....	31.....	.....	5.5.....	2.281.....	E.....	.....
.....6, 4.....	31.....	.....	5.5-6.....	3.180.....	E.....	M.....
.....66, 8.....	sub 73, 72	.....	5.5.....	3.9-4.63.....	.....	1.....
.....56, 8, 2.....	70.....	.....	4.5-5.....	5-5.4.....	.....	I.....
.....27, 3, 63, 8.....	70.....	.....	5.5.....	4.9.....	.....	.....
.....21, 8.....	72.....	.....	.....	3.1.....	6.....	.....
.....8 to 2, 4.....	31.....	D.....	4.5.....	3.16.....	2.5.....	III.....
23, 1, 53, 3, 5.....	72, 31.....	D.....	5.....	2.3.....	1.5.....	VI.....
.....1.....	82.....	.....	5.....	2.54.....	6.....	III.....
.....1, 9.....	72.....	E.....	4.5.....	2.7.....	E.....	VI.....
.....6, 1 to 1.....	81.....	.....	4.5.....	2.26.....	E.....	IV.....
.....46, 5.....	79.....	U.....	5-5.5.....	2.9.....	3.5.....	IV.....
.....1, 6, 5, 4.....	70, 72.....	F.....	3.....	1.87.....	.....	A.....
.....1.....	74.....	.....	1-2.....	2.1.....	.....	A.....
.....1, 4.....	70.....	.....	1.8-2.....	2.574-2.835.....	.....	.....
.....1.....	.....	.....	3.5.....	2.....	.....	.....
.....1.....	.....	.....	2.0.....	1.485.....	.....	.....
45-5-35-4.2.....	.....	.....	2.5-3.....	2.6-2.8.....	.....	III.....
.....1.....	72.....	E.....	5.....	2.35.....	2.....	IV.....
.....7, 2.....	.....	.....	5.....	2.43.....	6.....	M.....
.....1 to 3.....	72.....	.....	5.5.....	2.25.....	2.....	IV.....
.....1.....	72.....	E.....	5.5.....	2.2.....	2.2.....	V.....
.....8, 5.....	.....	W.....	.....	.....	E.....	M.....
.....1.....	79.....	U.....	5.....	2.3.....	E.....	?.....
.....23, 1, 7, 4, 3.....	72.....	.....	4-4.5.....	2.69-2.16.....	.....	VI.....
.....3 to 1, 7, 4, 5, 3.....	72.....	not Clcv.....	5-5.5.....	2.28.....	2.5.....	I.....
.....1, 7, 8.....	1.....	.....	5.5.....	2.27.....	E.....	III.....
.....23, 1, 8.....	72.....	II.....	5.....	1.923.....	E.....	I.....
.....1, 3.....	72.....	F. II.....	4-5.....	2.08-2.19.....	E.....	.....
{ 23, 5, 1, 4.....	.....	.....	.....	.....	.....	.....
{ 1, 3, 1, 43, 3.....	72.....	F.....	4.5.....	2.04-2.17.....	2.5-3.....	VI.....
.....23 or 1.....	72.....	D.....	5.5.....	2.06.....	E.....	III.....
.....1, (3).....	72.....	.....	4-4.5.....	2.2.....	3.....	IV.....
.....1, 3.....	72.....	.....	4.5.....	2.45.....	3.5.....	IV.....
.....1.....	72.....	U.....	3.5-4.....	2.2.....	E.....	.....
.....1, 5, 3.....	31, 72.....	E.....	3.5-4.....	2.16.....	2-25.2.....	IV.....
.....1, 6, 5.....	72.....	H.....	4-4.5.....	2.249.....	E.....	III.....
.....23 to 1.....	72.....	.....	.....	.....	E.....	III.....
.....1, 3.....	31, 72.....	Cld.....	3.5-4.....	2.2.....	2-2.5.....	V.....
.....5, 1, to 7.....	31, 72.....	E.....	5.....	2.45.....	3.....	V.....
.....1.....	79.....	Cry.....	5.....	2.08.....	E.....	.....
.....1.....	31, 1.....	ct.....	4.5.....	2.441.....	E.....	III.....
.....1, 43 to 21.....	31.....	L, S.....	1.....	1.465.....	E.....	.....
.....63, 1.....	.....	.....	.....	2.7.....	6.....	IV.....
.....1, 7, 4.....	31.....	Mi to T.....	1-2.....	2.9.....	6.....	IV.....
.....1, 68, 5.....	.....	.....	1.5.....	2.72.....	6.....	.....
.....7, 1.....	66.....	.....	2-2.5.....	.....	5.....	.....
.....64, 1.....	.....	.....	.....	2.21.....	.....	.....
.....1, 7, 3.....	66.....	Soft.....	.....	2.2.....	.....	A.....
.....5, 7, 8.....	.....	.....	.....	.....	.....	.....
.....4, 1.....	.....	.....	2-2.5.....	2.26.....	.....	.....
.....1.....	72.....	ct.....	5.....	2.4.....	F.....	M.....
.....1, to 53, 3.....	.....	Z.....	1.15.....	2.335.....	.....	A.....
.....1, 7, 4.....	23.....	.....	Soft.....	1.9-2.1.....	.....	M.....

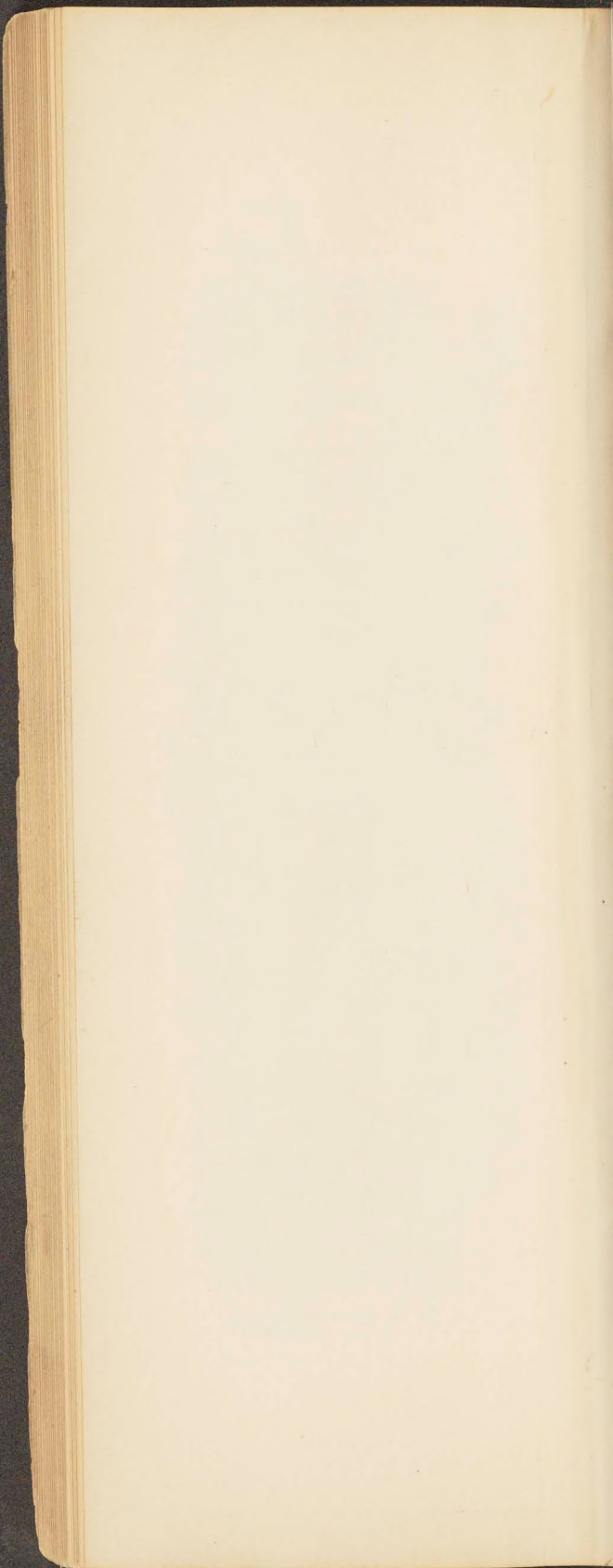




Species No.	SPECIES.	Page in Dana	COMPOSITION.
406	Montmorillonite.....	459...	$(\frac{4}{3} \text{Al} + \frac{1}{3} \text{H}^3) \text{Si}^3 + 5 \text{H} \dots$
406	A. Razoumoffskin.....	460...	$\text{R O, R O}_3, \text{Si O}_2, \text{R} \dots$
407	Stilpnomelane.....	460...	$\text{Fe, Fe, Al, Mg Li, H O} \dots$
408	Chloropal.....	461...	$(\text{Fe, } ^3\text{Fe O}_3) \text{Si}^3 \text{O}_2 + 4 \frac{1}{2} \text{H} \dots$
409	Glaucconite.....	462...	$\text{Si K Fe Al Mg H O} \dots$
410	Celadonite.....	463...	$\text{Si O}_2, \text{Fe O}_3, \text{Mg O, K O, H} \dots$
411	Serpentine.....	464...	$\left\{ \begin{array}{l} 2 \text{ Mg O Si O}_2 + \text{Mg O} \\ \text{H, with small amount} \\ \text{of Fe} \end{array} \right\}$
412	Bastite, or Schiller... spar	469	$\text{R O, R O}_2, \text{Si O}_2, \text{H} \dots$
412	A. Refsdanskite.....	469...	$\text{R O, Si O}_2, \text{H Ni} \dots$
413	Deweylite.....	469...	$\text{Mg O, Si, O}_2 \text{ H} \dots$
414	Cerolite.....	470...	$\text{Si O}_2, \text{Mg O, H} \dots$
414	A. Limbachite.....	Ap 2-34	$3 \text{ Mg } 2 \text{ Si} + \text{Al Si} + 3 \text{ H} \dots$
415	Hydrophite.....	470...	$\text{R O, R O}_3, \text{Si O}_2 \text{ H} \dots$
415	A. Dermatit.....	471...	$(\text{Mg O, Fe}^3 \text{ Si}^3 \text{O}_2 + 6 \text{ H} \dots$
415	B. Aquacreptite.....	Ap. 1-2	$\text{Si O}_2, \text{Al O}_3 \text{ Mg O, Fe O, H} \dots$
416	Genthite.....	471...	$\text{Ni, Mg O, Si O}_2 \text{ H} \dots$
417	Saponite.....	472...	$\text{R O, R O}_3, \text{Si O}_2, \text{H} \dots$
418	Pholerite.....	472...	$\text{Al}^2 \text{O}_3 \text{ Si}^3 \text{O}_2 + 4 \text{ H} \dots$
418	A. Teratolite.....	473...	$\text{R O, R O}_3, \text{Si O}_2, \text{H} \dots$
419	Kaolinite.....	473...	$\text{Al O}_3 \text{ Si}^2 \text{O}_2 + 2 \text{ H} \dots$
420	Halloysite.....	475...	$\text{Al O}_3, \text{Si}^2 \text{O}_2 + 3 \text{ H} \dots$
420	A. Sinopite.....	477...	$\text{R O, R O}_3, \text{Si O}_2 \text{ H} \dots$
420	B Melinite.....	477...	$\text{R O R O}_3 \text{ Si O}_2 \text{ H} \dots$
420	C. Oehran.....	477...	$\text{Si O}_2 \text{ Al O}_3 \text{ Fe O}_3 \dots$
420	D. Oravitzite.....	477...	$\text{Si O}_2, \text{R O, R O}_3, \text{H Zn O} \dots$
420	E. Hverlera.....	478...	$\text{Si O}_2, \text{Al O}_3, \text{Fe O}_3, \text{Mg O, Ti} \dots$
420	F. Keffekilite.....	478...	$\text{R O, R O}_3, \text{Si O}_2 \text{ H} \dots$
420	G. Melopsite.....	478...	$\text{R O R O}_3, \text{Si O}_2 \text{ H} \dots$
420	H. Achtaragdit.....	478...	$\text{R O R O}_3 \text{ Si O}_2 \text{ H} \dots$
421	Samoit.....	478...	$\text{Al}^2 \text{O}_3 \text{ Si}^3 \text{O}_2 + 10 \text{ H} \dots$
422	Pinite.....	479...	$(\frac{1}{4} \text{H} + \frac{3}{4} (\text{R}^3 \text{R})) ^2 \text{Si}^3 \text{O}_2$
422	A. Gumbellite.....	Ap. 1-6	$\text{R O, R O}_3, \text{Si O}_2 \text{ H} \dots$
423	Cataspilite.....	483...	$(\frac{3}{8} \text{R}^3 + \frac{5}{8} \text{Al}) ^2 \text{Si}^3 + \frac{3}{4} \text{H} \dots$
423	A. Neurolite.....	482...	$\text{Si O}_2, \text{Al O}_3, \text{H} \dots$
423	B.....	482...	$\text{R O, R O}_3 \text{ Si O}_2 \text{ H} \dots$
424	Biharite.....	483...	$\text{R O}_3, \text{R O, Si O}_2 \text{ H} \dots$
425	Palagonite.....	483...	$\text{Al Fe Mg Ca Na Si O} \dots$
426	Fahlunite.....	484...	$\text{Al Fe Si O} \dots$
427	Groppite.....	486...	$\text{R O, R O}_3, \text{Si O}_2, \text{H} \dots$
428	Voigtite.....	486...	$\text{Al O}_3 \text{ Fe O}_3 \text{ Fe O Mg O Si O}_2 \text{ H} \dots$
429	Margarodite.....	487...	$\text{Muscovite} + \text{H} \dots$
429	A. Gilbertite.....	Ap. 2-24	$\text{R O, R O}_3, \text{Si O}_2, \text{H, Fl} \dots$
430	Damourite.....	487...	$\text{Si O}_2, \text{Al O}_3, \text{Fe O}_3, \text{K O, H} \dots$
430	A. Sericite.....	487...	$\text{R O R O}_3 \text{ Si O}_2 \text{ H Ti} \dots$
431	Paragonite.....	487...	$(\frac{1}{4} (\text{H}^3, \text{Na}^3) + \frac{3}{4} \text{Al}) ^2 \text{Si}^2 \dots$
431	A. Ivigite.....	Ap. 1-7	$\text{Si O}_2, \text{Al O}_3, \text{Fe O}_3, \text{Na O, H} \dots$
432	Euphyllite.....	488...	$\text{Al O}_3, \text{K O, Na O, Si O}_2, \text{H} \dots$
433	Gellacherite.....	489...	$\text{Ba O K O Mg O Al O}_3, \text{Si O}_2 \text{ H} \dots$
434	Cookeite.....	489...	$\text{Al O}_3, \text{Si O}_2, \text{K O, Si O}_2, \text{H, Fl} \dots$
435	Hisingerite.....	489...	$(\text{R O } ^3 \text{R O}_3) ^2 \text{Si}^3 \text{O}_2 + 4 \text{ aq.} \dots$
436	Ekmannite.....	490...	$\text{Fe, Mn O, Mg O, Si O}_2, \text{H} \dots$
437	Neotocite.....	491...	$(\text{R}^3 \text{O, R O}_3) ^2 \text{Si}^3 \text{O}_2 \dots$
438	Stübelite.....	492...	$\text{R O R O}_3, \text{Si O}_2, \text{H, Cu O} \dots$
439	Gillingite.....	492...	$(\text{R}^3 \text{O, R O}_3) ^2 \text{Si}^3 \text{O}_2 + 6 \text{ aq.} \dots$
440	Jollyte.....	492...	$(\frac{1}{3} (\text{Fe Mg})^3 + \frac{2}{3} \text{Al}) \text{Si}^3 + 4 \dots$
441	Epichlorite.....	493...	$\text{R O, R O}_3, \text{Si O}_2, \text{H} \dots$
442	Polyhydrite.....	493...	$\text{Si Fe, Fe Al, Mn O} \dots$
442	B. Hygrophilite.....	Ap. 2-29	$\text{R O, R O}_3, \text{Si O}_2, \text{H} \dots$
443	Lillite.....	493...	$\text{R O, R O}_3, \text{Si O}_2,$

TS' AGENCY CATALOGUE.

Color.	Streak or Lustre	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
to 7, 4, 5, 3			Soft		E	M.
4, 1						
5, 5, to 4, 7.	31 sub. 73	S	3	2.76	E	
39, 4 to 5	77		2.5-4.5	2		M.
34 to 54, 4	66		2	2.2-2.4		A.
22, 34, 4			Soft			
1, 7 va- rious shades of 62, 4, 5, 3 & 2	{ Sub. 70, 78 31, 70, 79 and 77	K	2.5-5.5	2.5-2.65	6	only found in pseud.
			3.4	2.55	6	
22, 7, 4				2.77		M.
1, 5, 3	78		3	2.2	5	
5, 3, 4			2-2.5	2.3		M.
7 to 4	78			2.395		M.
4			2.5-3.5	2.65	3	M.
8, 5	66	F	2.5	2.05		M.
3 to 37, 4	70		3-4	2.4		A.
5, 7, 6, 3, 4	78		Soft	2.263	6	M.
1, 7, 3	31		1-2	2.5		IV.
43, 6			2-2½	2.49		
1, 7, 8	31		1-2	2.5		IV.
7, 4, 5, 3	59		1-2	2		
37, 3						
5				2.24		
5	5 to 23		1-2	2.4-2.5		
4, 1	59		2-2½	2.701		M.
1, 3						
31, 7				2.40		
1, 5, 7						
7, 1						M.
1, 7, 5			4-4.5	1.7-1.9		S.
1, 4, 8, 3	59		2.5 3.5	2.6-2.85	E	A.
4, 1	31		Soft		4	
47, 7	31		2.5		E	P.
4, 5			4.25	2.476		
4	59		3	2.66	E	M.
5, 4, 8	78		2.5	2.737		M.
5, 3, 2	72, 78		4-5	1.8-2.7	E	
7, 4	23	D	3.5-5	2.6-2.8	E	
3, 3 to 8, 3			2.5	2.73	6	
35, 4, 5	31	Mi	2.5	2.91	C	
1, 7	31	L	2.5	2.8	6	IV.
1, 4, 5			1	2.65	6	M.
5, 1	31		2-3	2.791		
4, 5, 1			1	2.897		
	31		2.5-3	2.779		M.
8, 5			2-2.5	2.05	E	
1	31	L	3.5	2.8	4-4.5	
1, 7	31	L		2.9		
1	31	Mi	2.5	2.7	D	
2, 8	78 to 72	Z	3	3.045		A.
35, 4 to 2	78		2.5		E	
2, 21, 8	66		3-4	2.64	6	A.
51, 2	72		4-5	2.223		
2	74 to 66		3	3.045	E	A.
8			3	2.61	D	A.
66, 35, 4	78		2-2.5	2.76	6	
61, 8	66		2-3	2.695		A.
4, 7, 5	78		2-2.5	2.67	E	
2, 4			2	3.043		M.
21, 35, 4						
3 to 37, 4	31	Mi	3	2.74	4	V?
8, 5	31	Mi	1.5	2.75	3.5	VI?
						IV.
4, 5						VI?
1, 5	79		2.5-3	2.9	3.54	
8, 5	31	Mi	1.5	2.3	E	IV?
4, 5	31	Mi	1.5	2.3	E	
21, 8	31	Mi	2	2.8	5.5	
4, 7, 3	31	L	2.5	2.7		III.
19, 7, 4			2.5	2.34		M.



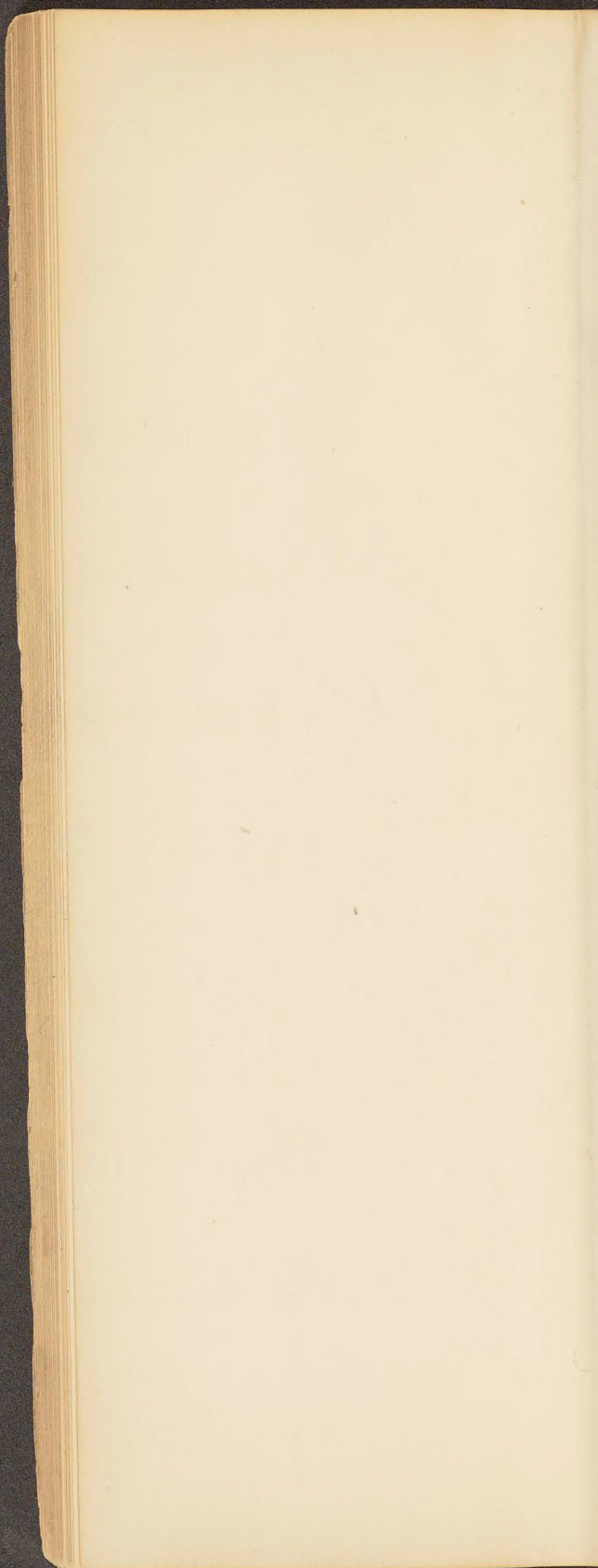
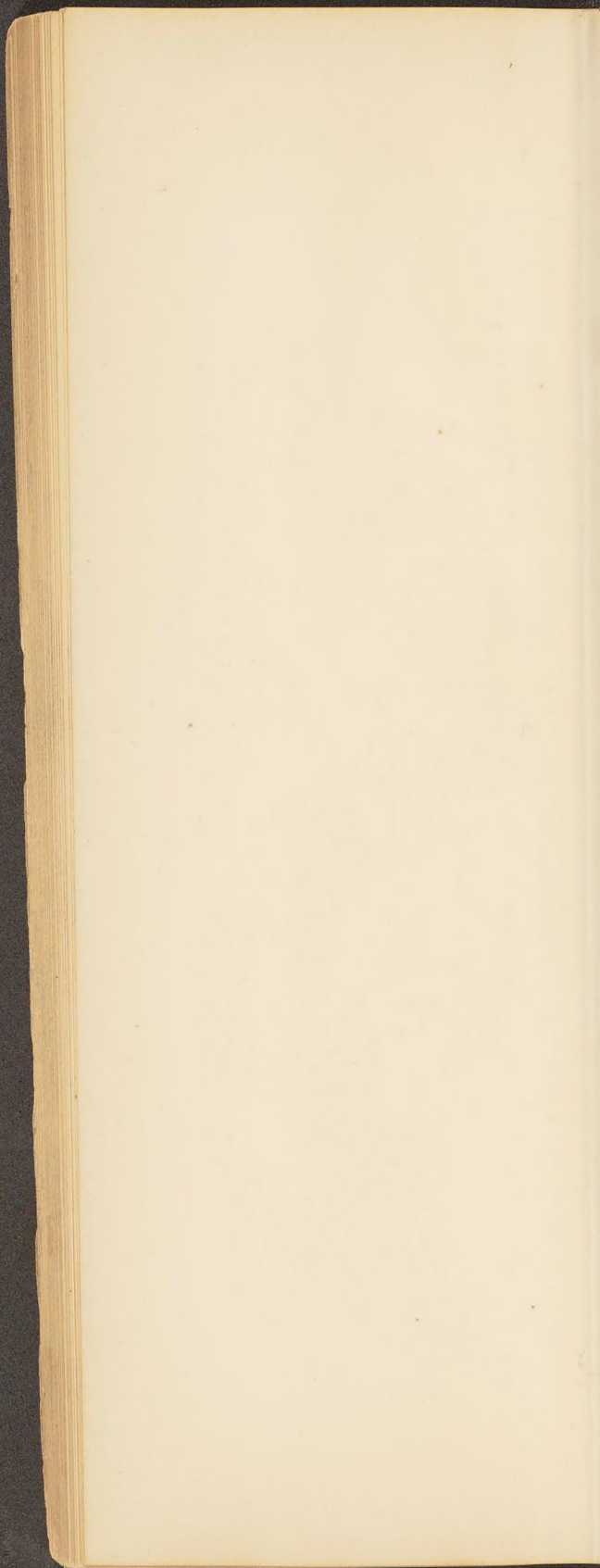


TABLE OF MIN.

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
449	Delessite.....	497...	Mg O, Al O ₃ , Fe O ₃ , Si O ₂ , H.
449	A. Euralite.....	Ap. 1-6	Al O ₃ Fe O ₃ Fe O Mg O Si O ₂ H
450	Ripidolite.....	497...	Mg ⁶ O, Al O ₃ , Si ³ O ₂ , H ⁴ .
451	Leuchtenbergite.....	500...	($\frac{3}{2}$ Mg ³ + $\frac{2}{3}$ Al) Si + 1 $\frac{1}{2}$ H.
452	Prochlorite.....	501...	Al Fe Si H O.
453	Grensesite.....	502...	R O, R O ₃ , Si O ₂ , Cr O ₃ .
454	Aphrosiderite.....	502...	Fe ³ O ₃ Si O ₂ Al O ₃ Si O ₂ + 2 H
454	A. Strigovite.....	Ap. 2-53	R O, R O ₃ , Si O ₂ , H.
455	Metachlorite.....	503...	R O, R O ₃ , Si O ₂ , H.
455	A. Dumasite.....	503...	.....
456	Cronstedtite.....	503...	Mn, Mg, Fe, Si, H O.
456	A. Sideroschisolite.....	504...	Fe ₄ O, Si O ₂ + 1 $\frac{1}{2}$ H.
457	Corundophilite.....	504...	($\frac{1}{4}$ R ³ + $\frac{1}{2}$ Al) 4Si ³ + 5 H.
458	Chloritoid.....	504...	Al Fe Mg Si H O.
458	A. Phyllite.....	506...	R O, R O ₃ , Si O ₂ , H, Mn.
458	B. Guadalcazarite.....	Ap. 2-15	6 Hg S + Zn S.
459	Margarite.....	509...	Al O ₃ , Ca O, Na O, Si O ₂ , H.
459	A. Dudleyite.....	Ap. 2-17	Na O Mg O Fe O ₃ Al O ₃ Si O ₂ H
459	B. Willcoxite.....	Ap. 2-61	K, Na, Mg, Fe, Al, Si, H.
460	Thuringite.....	407...	Al Fe Si H O.
461	Seybertite.....	508...	Al, Fe, Mg, Ca, Si, H.
462	Welchonskoite.....	509...	Cr, Al, Fe, Mg, Si, H.
463	Selwynite.....	509...	Si O ₂ , Al O ₃ , Cr O ₃ , Mg, H.
464	Chrome Ochre.....	510...	Si ₃ O ₂ (Al O ₃ , Cr O ₃ , Fe O ₃) ²
465	Miloschite.....	510...	(Al O ₃ , Cr O ₃) Si O ₂ + 3 H.
466	Pimelite.....	510...	Si, Al, Fe, Ni, Mg, H.
467	Chlorophæite.....	510...	Fe O Si O ₂ + 6 H?
468	Klipsteinite.....	511...	Mn O ₃ , Mn O, Si O ₂ , H.
469	Chamoisite.....	511...	Si O ₃ , Al O ₃ , Fe O, H.
470	Alvite.....	511...	Si, Al, Be, Fe, Zr, Th C.
471	A. Picrofluite.....	512...	Si O ₂ , Mg O, Ca O, H Fe.
471	Pyrochlore.....	512...	Ca O, Ce O, Cb O ₅ .
471	A. Koppite.....	Ap. 2-32	5 R O, 2 Cb ₂ O ₅ .
472	Microlite.....	513...	Cb O ₅ Ca O W O ₃ Y O U O ₂
473	Tantalite.....	514...	Fe O, Mn O, Ta O ₅ , Sn O ₂
474	Columbite.....	515...	Fe O Mn O Cb O ₅ Ta O ₅ Sn O ₂
475	Tapiolite.....	518...	Fe ⁶ O, Ta ⁴ O ₅ .
476	Hielmite.....	519...	Ta, Sn, W, Fe, U, Y.
477	Yttrotantalite.....	519...	Ca, Y, V, Fe, Ta, W.
478	Samarskite.....	520...	Cb O ₅ , Fe O, U O ₃ , Y O.
478	A. Nohlite.....	Ap. 2-41	R ³ Cb O ₅ + 1 $\frac{1}{2}$ H.
479	Euxenite.....	521...	Y, U, Ce, Ti, Cb, Ta O.
480	Aeschnyite.....	522...	Zr, Fe, Ce, Y, Cb, Ti O.
481	Polycrase.....	523...	Fe, Ce, Y, Zr, Ti, Cb O.
482	Polymignite.....	523...	" "
483	Fergusonite.....	524...	Y O, Fe O, U O, Cb O ₅ .
484	Adelpholite.....	525...	Cb O ₅ , Fe O, Mn O.
485	Mengite.....	525...	Zr O ₂ , Fe O ₃ , Ti O ₂ .
486	Rutherfordite.....	526...	Ti O ₂ , Ce O.
490	A. Xenotime.....	527...	(Y O, Ce O) ³ P O ₅ .
490	Osteolite. [Coprolites	533...	P O ₅ , Ca O, Si O ₂ , H.
490	B. Phosphate Nodules	534...	P O ₅ , Ca O, C O ₂ , Mg O, Fe O ₃
490	C. Staffelite.....	534...	Ca O, ³ P O ₅ , Ca O, C O ₂ .
490	D. Guano.....	535...	P O ₅ , Ca O, C O ₂ .
490	E. Epiphosphorite.....	535...	P O ₅ , Ca O, Fe O ₃ , Al O ₃ , Si O ₂ .
490	F. Talc-Apatite.....	535...	3 Ca O ³ P O ₅ + Mg ³ O P O ₅ .
490	G. Hydroapatite.....	535...	3 Ca ³ O P O ₅ + Ca F + H.
491	Cryptolite.....	529...	Ce ³ O P O ₅ .
492	Apatite.....	530...	Ca ³ O P O ₅ + $\frac{1}{2}$ Ca (Cl F).
493	Pyromorphite.....	535...	3 Pb ³ O + Pb Cl.
494	Mimetite.....	537...	3 Pb ³ O As O ₅ + Pb Cl.
495	Wagnerite.....	533...	2 Mg ³ O P O ₅ + (Mg, Na) Fl.
495	Monazite.....	539...	Ce O, La O, Di O, Th O ₂ , P O ₅ .
497	Turnerite.....	540...	Ce O, La O, Di O, Th O ₂ , P O ₅ .
498	Triphylite.....	541...	(Fe O, Mn O, Li O) ³ P O ₅ .
499	Sarcopsidite.....	Ap. 1-14	Mn O, Fe O, Fe O ₃ , Fl, P O ₅ .
499	Triplite.....	543...	R ³ O ₂ P O ₅ + R Fl.
500	Hopeite.....	514...	P O ₅ , Zn O, Cd O.
501	Berzeliite.....	544...	(Ca O, Mg O, Mn O) ¹⁰ As ³ O ₅ .
502	Carminite.....	545...	($\frac{1}{2}$ (Li, Na) ³ + $\frac{1}{2}$ Al) ⁴ P.
503	Amblygonite.....	545...	{ A little Fl. - ($\frac{1}{2}$ Li O) } { Na O) ³ + $\frac{1}{2}$ Al O ₃) ⁴ P O ₅ }
503	A. Durangite.....	Ap. 1-4	Na Al Fe Mn Si Fl As O ₅
503	B. Hebronite.....	Ap. 2-27	Na Al Fe Mn Si Fl As O ₅
504	Herderite.....	546...	Na Al Fe Mn Si Fl As O ₅
505	Monimolite.....	546...	{ (Pb O, Fe O, Mn O) } { Ca O, Mg O,) ⁴ Sb O ₅ }
506	Romeite.....	547...	R ³ O, Sb O ³ , Sb O ₅ .

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity	Fusibility.	Crystalliza- tion.
21, 34, 4...	...	...	1-2.5...	2.89...	6...	...
21, 4 to 2...	...	...	2.5...	2.2...	E...	...
{ shades } of 4 to 3 }	81, 31...	L...	2.5...	2.7...	6...	V...
1...	31...	D...	2.5...	2.65...	6...	III.
4, 2...	31...	L...	1-2...	2.7-2.9...	6...	III.
6, 8, 4...	...	Mi...	...	...	...	...
21, 34, 4...	...	...	1...	2.8...	...	...
21, 4...	4...	...	1...	3.144...	6...	...
66, 35, 4...	31...	...	2.5...	...	...	...
51...	...	...	soft...	...	...	...
50, 2...	72...	D...	3.5...	3.35...	E...	III.
50, 2...	4...	D.W...	3-3.4...	2.5...	E...	VI.
34, 4, 35, 4...	...	...	2.5...	2.90...	...	IV.
7, 4, 2...	72...	D...	5-6...	3.5-3.6...	6...	V?
2, 7, 4...	2, 7...	T...	5-5.5...	4.4...	6...	...
13, 2...	2...	S...	2...	7.15...	E...	M...
1, 3, 7...	31...	Mi...	4...	2.99...	4-4.5...	...
15...	31...	Mi...	...	...	6...	...
7...	31...	Mi...	1.5...	...	6...	...
34, 4, 39, 4...	74 to 66	K...	2.5...	3.186...	3...	M...
5, 3, 8...	31...	L...	4.5...	3.1...	...	IV.
6, 38, 4...	66...	...	2-2.5...	2.3...	...	A...
37, 4...	...	H...	3.5...	2.53...	6...	M...
4...	...	...	...	2.7...	...	A...
6, 4...	...	...	1.5...	2.13...	...	...
43, 4...	78...	...	2.5...	2.23-2.3...	...	M...
21, 4, 34, 4...	...	...	1.5-2...	2.02...	E...	G.M
21, 61, 8 to 2	66 to sub 73	...	...	...	E...	...
4, 7 to 2...	...	...	3...	3-3.4...	E...	...
3, 8...	78...	...	5.5...	3.601...	...	II.
1, 5, 6...	78 to 66...	...	2.5...	2.74...	E...	A...
8, 3...	72...	...	5.5...	4.3...	...	...
8...	...	...	...	...	...	G...
8, 5...	72, 70...	...	5.5...	4.485-5.562	...	I...
2...	2, 8...	F...	6-6.5...	7-8...	...	IV.
2...	3, 2...	F...	6...	5.4-6.5...	...	IV.
2...	71, 73...	not ct., C	6...	7.35...	...	II.
2...	73...	not ct.	5...	5.82...	...	M...
5 to 2...	7...	Z...	5.5...	5.7...	...	IV.
20, 2...	21, 3...	...	5.5-6...	5.6...	4.5...	IV.
2, 8...	8...	II...	4.5-5.0...	5.04...	E...	M...
8, 2...	75, 74...	...	6.5...	4.9...	...	IV.
2...	70...	...	5-6...	5.1...	...	IV.
2...	sub. 73...	...	5.5-6.5...	4.8-5.1...	...	IV.
2...	...	...	...	...	...	...
2...	19, 8...	Z...	5.5-6...	5.8...	...	II.
8, 5, 8, 2...	1...	...	3.5-4.5...	3.8...	...	II.
13, 2...	81, 8...	...	5-5.5...	5.48...	...	III.
8, 2...	5, 8...	Z, F...	5.5...	5.58...	...	IV.
5, 8, 3...	70...	E...	4-5...	4.5...	...	II.
1, 7...	...	...	1-2...	2.8-3.1...	...	M...
8, 2...	...	...	2.5...	2.313...	...	...
35, 4 to 4, 5...	...	...	4...	3.13...	...	S...
7, 1, 5, 8...	...	...	...	...	...	...
5...	...	...	4.5-4...	3.125...	...	...
64, 1...	66, 77...	...	5...	2.7-2.75...	...	...
64, 1...	...	...	5.5...	3.10...	...	...
5-23...	...	...	...	4.6...	...	...
54, 4, 6, 5, 3, 1	72...	...	5...	2.9-3.2...	4.5-5...	III.
1, 8, 3...	70...	F...	3.5-4...	6.5-7.1...	1.5...	III.
5, 8...	70...	...	3.5...	7.1...	1...	III.
5...	72...	...	5.5...	3.07...	3.5...	V...
5, 63, 3, 8...	70...	D...	5-5.5...	5.2...	...	V...
5, 8...	71, 7...	...	4...	...	...	...
4 to 7, 6...	70...	W...	5...	3.54...	1.5...	IV.
48, 3 to 49, 6	79...	...	4...	3.7...	1.5...	V?
8, 2...	70...	in 3...	5...	3.6...	1.5...	IV.
7, 1, 3, 8...	72, 1...	W...	2.5-3...	2.76-2.85...	4.5...	III.
22, 1 or 45, 5	59...	F...	5-6...	2.52...	...	M...
54, 4, 1, 78, 1	31, 72...	W...	6...	3-3.11...	E...	V...
4, 7, 1...	72...	Clev. at 105.0	6...	3.11...	2...	VI.
56, 3...	72...	E...	5...	4...	2...	V...
7, 1...	72...	Cl. at 105.0	6...	3.04...	2...	VI.
5, & 4, 1...	72, 1...	Z, F...	5...	2.985...	5...	III.
5...	70...	C...	4.5-5...	5.94...	E...	M...
45, 5...	...	...	5.5...	4.714...	E...	II.





Species No.	SPECIES.	Page in Dana.	COMPOSITION.
507	Ammiolite.....	547...	Hg Cu Fe S Sb O ₅
507	A. Rivotite.....	Ap. 2-48	Sb ₂ O ₅ +4 { Cu O } C
508	Arsenate of Nickel.....	548...	Ni ³ O As O ₅
509	Arsenate of Nickel.....	548...	Ni ³ O As O ₅
510	Nadorite.....	Ap. 1-11	Sb, Pb, O, Cl.....
515	Stercorite.....	551...	NaO NH ⁴ O P O ₅ +9 H.
516	Struvite.....	551...	(NH ₄ O, MgO) ² P O ₅ +12 H.
517	Haidingerite.....	552...	($\frac{2}{3}$ CaO + $\frac{1}{3}$ H) ³ As O ₅ +3 H.
518	Brushite.....	552...	($\frac{2}{3}$ CaO + $\frac{1}{3}$ H) ³ P O ₅ +3 H.
518	A. Kollophan.....	Ap. 1-9	P O ₅ , Ca O, H, C ²
519	Metabrushite.....	553...	($\frac{2}{3}$ CaO + $\frac{1}{3}$ H) ³ P O ₅ +3 H.
520	Pharmacolite.....	554...	Ca ² O As O ₅ +6 H.....
520	A. Picropharmacolite.....	555...	(CaO, MgO) ⁵ As O ₅ +12 H.
520	B. Isoclasite.....	Ap. 1-7	Ca ³ O P O ₅ +Ca O H+4 H.
520	C. Wapplerite.....	Ap. 2-60	2 Ca O As O ₅ +8 H.....
521	Churchite.....	555...	($\frac{5}{6}$ CeO + $\frac{1}{6}$ CaO) ³ P O ₅ +4 H.
522	Hoernesite.....	556...	Mg ³ O As O ₅ +8 H.....
523	Roesslerite.....	556...	($\frac{2}{3}$ MgO + $\frac{1}{3}$ H) ³ As O ₅ +12 H.
523	A. Bobierite.....	795...	Mg ³ O P O ₅ with H ₂ O.....
524	Vivianite.....	556...	Fe ³ O P O ₅ +8 H.....
525	Simplexite.....	558...	Fe O, As O ₅
526	Erythrite.....	558...	Co ³ O As O ₅ +8 H.....
526	A. Roselite.....	560...	R ₃ O As ₂ O ₅ +3 H.....
526	B. Lavendulan.....	560...	As O ₅ , Co O, Ni O, Cu O.....
526	C. Winklerite.....	Ap. 2-61	As O ₅ Ni Cu Co Ca G O ₂
527	Annabergite.....	560...	Ni ³ As O ₅ +8 H.....
528	Hydrous Bibasic Arsenate of Nickel and Cobalt }	560...	(Ni O Co O) ² As O ₅ +8 H.....
529	Cabrerite.....	561...	R ³ O As O ₅ +8 H.....
530	Köttigite.....	561...	(ZnOCoO NiO) ³ As O ₅ +8 H.
531	Hureaulite.....	561...	(Mn O, Fe O) ⁵ P ² O ₅ +5 H.
532	Chondrarsenite.....	562...	Mn ⁵ O As O ₅ +2 $\frac{1}{2}$ H.....
533	Trichalcite.....	562...	Cu ³ O As O ₅ +5 H.....
534	Thrombolite.....	562...	Cu O, H, P O ₅
535	Libethenite.....	563...	Cu ³ O P O ₅ +Cu O H.....
536	Olivenite.....	564...	Cu ³ (As O ₅ , P O ₅)+Cu O.....
537	Adamite.....	565...	Zn ³ O As O ₅ +Zn O H.....
538	Conichalcite.....	565...	Cu O Ca O P O ₅ As O ₅ V O ⁵
539	Bayldonite.....	565...	(Pb O, Cu O) ⁴ As O ₅ +2 H.
540	Euchroite.....	566...	Cu ³ O As O ₅ +Cu O H+6 H.
541	Tagilite.....	566...	Cu ³ P O ₅ +Cu O H+2 H.
541	A. Veszelyite.....	Ap. 2-59	4 Cu O P O ₅ +5 H.....
542	Liroconite.....	567...	Cu O, Al O ₃ , As O ₅ , P O ₅
543	Pseudomalachite.....	568...	Cu ³ O P O ₅ +2 Cu O H+.....
544	Erinite.....	569...	Cu ³ O As O ₅ +2 Cu O H.....
545	Cornwallite.....	569...	Cu ³ O As O ₅ +2 Cu O H+3 H.
546	Tyrolite.....	570...	Cu ³ O As O ₅ +2 Cu O H+7 H.
547	Clinoclasite.....	570...	Cu ³ O As O ₅ +3 Cu O H.....
548	Chalcophyllite.....	571...	Cu ³ As O ₅ +5 Cu O H+7 H.
549	Berlinite.....	571...	Al O ₃ P O ₅ + $\frac{1}{2}$ H.....
550	Callainite.....	572...	Al O ₃
550	A. Zepharovichite.....	Ap. 1-17	Al O ₃ P O ₅ +6 H.....
551	Lazulite.....	572...	AlO ₃ P O ₅ +(MgO, FeO).....
552	Barrandite.....	574...	($\frac{4}{7}$ Fe + $\frac{3}{7}$ Al) P+4 H.....
553	Scorodite.....	574...	Fe O ₃ As O ₅ +4 H.....
554	Wavellite.....	575...	Al ³ O ₃ P ² O ₅ +12 H with.....
554	A. Kapnicite.....	576...	Al O ₃ , P O ₅
554	B. Planerite.....	576...	(Al ³ O ₃ +9 H)+ $\frac{3}{4}$ (Cu Fe).....
554	C. Coeruleolactite.....	Ap. 1-3	Al ³ O ₃ P O ₅ +10 H.....
555	Trolleite.....	577...	Al O ₃ P O ₅ + $\frac{1}{3}$ Al O ₃ H.....
556	Plumbogummite.....	577...	Al O ₃ , Pb O, P O ₅ , H.....
557	Calcioferite.....	578...	P O ₅ , Fe O ₃ , Ca O, H.....
558	Pharmacosiderite.....	578...	{ 3 Fe O ₃ As O ₅ +Fe O ₃ } H ³ +12 H.....
559	Cirrolite.....	579...	Al ² O ₃ P O ₅ +2Ca ³ P O ₅ +3 H.
560	Childrenite.....	579...	Al O ³ Fe O ₃ Mn O P O ₅
561	Attacolite.....	580...	P O ₅ Al O ₃ Fe Mn Ca H.....
562	Angelite.....	580...	Al ² O ₃ P O ₅ +3 H.....
563	Turquoise.....	580...	Al O ₃ , Cu O, P O ₅ , H.....
564	Peganite.....	582...	Al ² O ₃ P O ₅ +6 H.....
565	Fischerite.....	582...	Al ² O ₃ P O ₅ +8 H.....
565	A. Variscite.....	582...	[+3.....
566	Tavistockite.....	582...	($\frac{1}{2}$ Ca ³ O + $\frac{1}{2}$ Al O ₃) ² P.....
567	Chenevixite.....	583...	(Fe O ₃ Cu ³ O) ² As O ₅ +3 H.
568	Dufremite.....	583...	Fe ² O ₃ P O ₅ +3 H.....
569	Cacoxenite.....	584...	Fe ² O ₃ P O ₅ +12 H (with.....
570	Arsenosiderite.....	584...	Ca O, Fe O ₃ , As O ₅ , H.....
571	Evansite.....	585...	Al ² O ₃ P O ₅ +AlO ₃ H ³ +15 H.
572	Torbernite.....	585...	U ₂ O ₃ P O ₅ +Cu O H+7 H.
572	A. Zeunerite.....	Ap. 2-62	Cu O, 2 U O ₃ As O ₅ +8 H.

ISTS' AGENCY CATALOGUE.

	Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
	21, 3.					S.	
O ²	5, 4 to 7, 4.	7, 4.	H.	3.5-4.	3.55.	E.	A.
	38, 4, 8.			4.	4.838.		M.
	24, 5.			4.	4.982.		A.
	8, 5.	70.		3.	7.02.	S. E.	IV.
	1, 8, 5.	72.			1.6151.	E.	M.
H	5 to 8, 1.	72.	D.	2.	1.7.	E.	IV.
H	1.	72, 1.		1.5-2.5.	2.848.	E.	III.
L.	5, 1.	31, 72.	W.	2-2.5.	2.21.	E.	V.
				5.	2.70.		
H.	19, 5.	F.		2.5-3.	2.288.	E.	IV.
	1, 7.	72.		2-2.5.	2.7.	E.	V.
H						E.	
H	61, 1.	31, 72.	W.	1.5.	2.92.	E.	V.
	1.	72.		2-2.5.	2.48.	E.	V.
H	19, 7.	72.	Z.	3.	3.14.		IV?
	60, 1.			0.5.	2.474.	E.	IV.
H	23, 1.	72 to 66.		2-3.	?	E.	
	{ Different }						IV.
	{ sh'd's of 6 }	31, 72.	W.	1.5-2.	2.6.	1.5.	V.
	19, 41, 4.	5, 1.	W.	2.5.	2.937.		IV.
	21, 3, 42, 3.	31.	E.	1.5-2.5.	2.94.	2.	V.
	53, 3.	72.	ct.			E.	III.
	49, 6.			2.5-3.	3.014.	E.	A.
H	6, 2.	8.	Z.	3.	3.432.		M.
	43, 4.	77.		soft.	E.	E.	V.
H.	7, 1.	66 to 79, 70.		2.5.	3.086.	D.	
	43, 4.	31.	W., C.	2.	2.96.	I.	IV.
H			W.	2.5-3.		E.	IV.
H.	56 to 3, 5.	72.		5.	3.2.	E.	V.
	5, 3.			3.		E.	G.
	36, 4.	79.		2.5.		F.	
	37, 35, 4.	72.	Z.	3-4.	3.38.	E.	A.
	21, 34, 5.	70.	Z, H. F.	4.	3.7.	2.	IV.
	34, 35, 2 to 4.			4.5.	3.93 (?)	E.	M.
	58 to 45, 5.	72.	ct.	3.5.	4.34.	E.	IV.
H	39 to 37, 4.			4.5.	4.12.	E.	M.
H.	38 to 2, 4.			4.5.	5.35.	E.	M.
H	35 to 37, 4.	72.	E.	3.5-4.	3.39.	2.	IV.
	36 to 37, 4.			3.	3.5 (?)	F.	M.
				4.	3.5.		
H	40, 6 to 4.	72.		2-2.5.	2.9.	E.	V.
H	21, 4.	72.		4.5-5.	4.2.	2.	IV.
	38 to 37, 4.	60.		4.5.	4.04.	E.	A.
H	37 to 36, 4.		Am.	4.5.	1.16.		
H	43, 36, 4.		D.	1-2.	3.06.	E.	IV.
	21, 6, 4.	31 to 72.	D.	2.5-3.	4.19-4.36.	2.	V.
H	37, 38, 4.	31.	D.	2.	2.5.	E.	III.
	1, 7, 3.	72.		6.	2.64.		M.
	43, 37, 4.			3.5-4.	2.50-2.52.		M.
	4, 5, 7, 1.	72.		5.	2.37.		C.
H	33, 6.	72.		5-6.	3.1.		V.
	19, 6, 8, 4.	72.	Cry.	4.5.	2.576.		
	35, 4 to 8.			3.5-4.	3.2.	E.	IV.
Fl	1, 5, 7, 8, 6, 4.	31.	rad.	3.5-4.	2.3.		IV.
			U.	3.5-4.	2.356.		
H	36, 4.	63.		5.	2.65.		
	64 to 6.	72.	H.	5.	2.5.		
Fe.	19, 4.	72.		5.5.	3.10.		C.
	1, 3 to 5, 7, 4.	70.		4-5.	4.8.	D.	
	24, 5, 4, 5.	31.	W. F.	2.5.	2.52-2.529.	E.	IV?
	4, 3, 8, 5.		A.	2.5.	3.	E.	I.
H	19, 5.			5-6.	3.08.	E.	C.
H	5, 8 to 8, 2.	72.		4.5-5.	3.18.	F.	IV.
L.	19, 3.			5.	3.9.	E.	M.
	23, 19, 3.	31.	ct.		2.77.		M.
	40, 6 to 4.	66.		6.	2.6-2.8.		M.
	21, 4, 7, 1.	72.		3-3.5.	2.5.		IV.
	38 to 34, 4.	72.		5.	2.46.		IV.
H	43, 4.	1, 74, 78.					
O ₅	1.	31.					
H	21, 4.			4.5.	3.93 (?)	E.	M.
	21, 35, 4.	79.	rad.	3.5-4.	3.3.	E.	IV.
Fl)	8, 5.	79.	U, rad.	3-4.	3.38.	6.	
	8, 5.	79.		1-2.	3.8.	E.	
H	1.	72.		3.5-4.	1.94.		
H.	38, 35 to 37, 4.	31.	Mi.	2-2.5.	3.5.	2.5.	II.
H.	5, 8, 43, 4.	31.	D. W.	2.5.	3.2.		II.



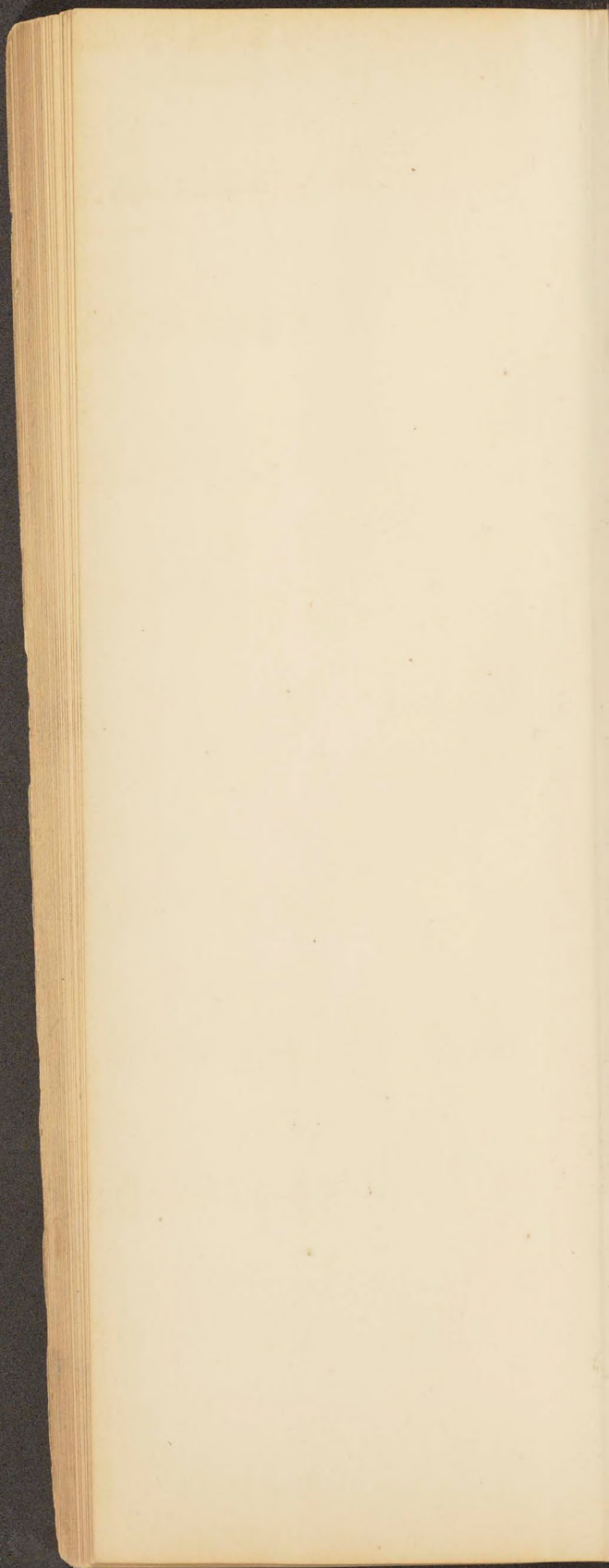
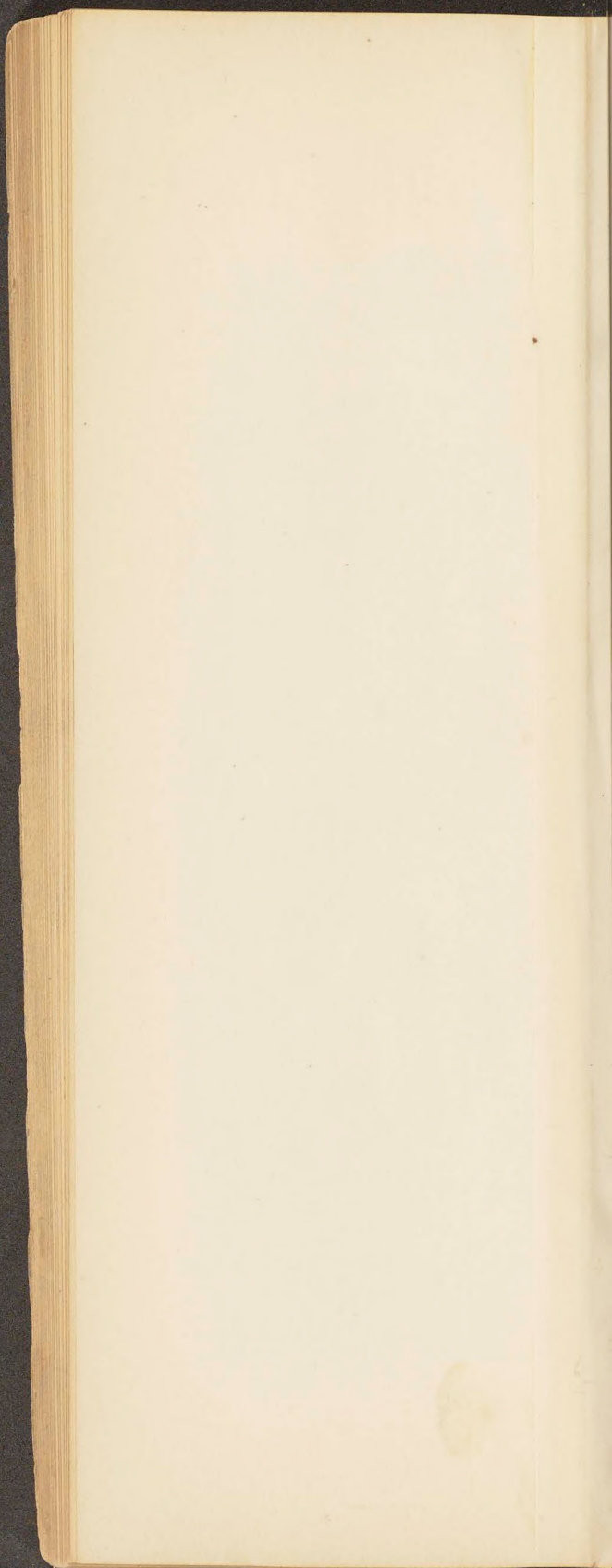
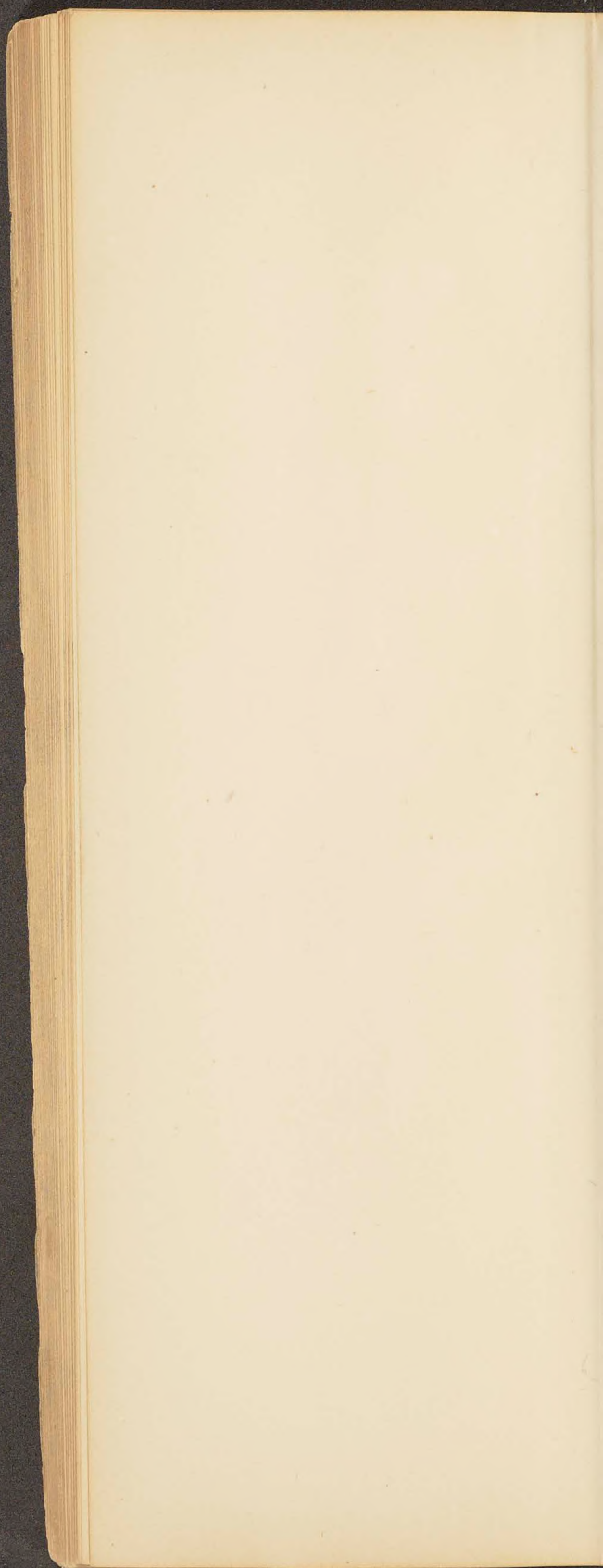


TABLE OF MINE

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
573	Autunite.....	586...	$U^2O_3 \cdot P_2O_5 + CaO \cdot H + 7H$
573	A. Walpurgite.....	Ap. 1-16	$B_2O_3 \cdot UO_3 \cdot As_2O_5 \cdot H$
573	B. Trögerite.....	Ap. 1-16	$U^5O_3 \cdot As_2O_5 + 20H$
573	C. Uranospinite.....	Ap. 2-58	$CaO \cdot UO_3 \cdot As_2O_5 + 8H$
574	Amphithalite.....	587...	$Al_2O_3 \cdot CaO \cdot P_2O_5 \cdot H$
574	A. Hydrrous Phosphate of Alumina and Lime.....	587...	$P_2O_5 \cdot Al_2O_3 \cdot CaO \cdot H$
574	B. Cupreous Phosphate of Alumina.....	587...	$P_2O_5 \cdot SiO_2 \cdot Al_2O_3 \cdot CuO \cdot NaH$
575	Sphaerite.....	587...	$Al_2O_3 \cdot P_2O_5 + 16H$
576	Borickite.....	588...	$(FeO_3 \cdot Ca^3) \cdot 5P_2O_5 + 15H$
577	Rhagite.....	Ap. 2-48	$Bi_5O_5 \cdot As_2O_5 \cdot H_3$ 32 H.
580	Diadochite.....	588...	$Fe^3O_3 \cdot P_2O_5 + 2FeO_3 \cdot S_2O_3 +$
581	Pitticite.....	589...	$FeO_3 \cdot As_2O_5 \cdot S_2O_3 \cdot H$
582	Beudantite.....	589...	$P_2O_5 \cdot H \cdot AsO_3 \cdot S_2O_3 \cdot FeO_3 \cdot PbO$ 21
583	Lindackerite.....	590...	$2Cu^3AsO_5 + NiO \cdot 3S_2O_3 + 7H$ 3
584	Svanbergite.....	590...	$Al_2O_3 \cdot CaO \cdot NaO \cdot P_2O_5 \cdot S_2O_3 \cdot H$
585	Ficinitite.....	590...	$P_2O_5 \cdot S_2O_3 \cdot FeO \cdot MnO \cdot H$
586	Bindheimite.....	591...	$Pb^3O \cdot SbO_5 + 4H$
587	Stibioferite.....	Ap. 2-53	$FeO_3 \cdot SbO_5 \cdot H$
590	Nitre.....	592...	KON_5
591	Soda nitre.....	593...	$NaON_5$
592	Nitrocalcite.....	593...	$CaON_5 + H$
593	Nitromagnesite.....	593...	$MgON_5$
594	Sassolite.....	594...	$B_2O_3 \cdot 3HO$
595	Szaibelyite.....	594...	$3MgO \cdot 5B_2O_3 + 4H$
595	A. Sussexite.....	Ap. 1-15	$(MnO \cdot MgO) \cdot 2B_2O_3 + H$
595	A. Ludwigite.....	Ap. 2-35	$2MgO \cdot B_2O_3 + FeO \cdot FeO_3$
597	Boracite.....	595...	$3CaO \cdot 4B_2O_3 + 3MgO \cdot 4B_2O_3 + 18$
597	A. Huyssenite.....	799...	$3MgO \cdot 4B_2O_3 + \frac{1}{2}MgCl$
598	Rhodizite.....	596...	$(\frac{1}{2}MgO + \frac{1}{2}FeO) \cdot 3B_2O_3$
598	A. Lüneburgite.....	Ap. 1-10	$CaNa \cdot 2B_2O_3 + H$ 7 H.
599	Borax.....	597...	$2(MgO \cdot H) \cdot P_2O_5 + MgO \cdot B_2O_3$
600	Bechillite.....	597...	$NaO \cdot 2B_2O_3 + 10H$
600	A. Priceite.....	Ap. 2-45	$(\frac{1}{2}CaO + \frac{1}{2}H) \cdot B_2O_3 + \frac{1}{2}H$
601	Howlite.....	598...	$3CaO \cdot 4B_2O_3 + 6H$
601	A. Winkworthite.....	Ap. 1-17	$CaO \cdot B_2O_3 \cdot SiO_2 \cdot H$
602	Ulexite.....	598...	Mixture B_2O_3
603	Cryptomorphite.....	599...	$NaO \cdot CaO \cdot B_2O_3 \cdot H$ [H]
604	Larderellite.....	600...	$(\frac{1}{2}(NaO \cdot CaO) + \frac{1}{2}H) \cdot B_2O_3$
605	Lagonite.....	600...	$NH^4 \cdot 4B_2O_3 + 4H$
606	Warwickite.....	600...	$FeO_3 \cdot 3B_2O_3 + 3H$
610	Wolframite.....	601...	$MgO \cdot FeO \cdot TiO_2 \cdot B_2O_3$
611	Hübnerite.....	603...	$(MnO \cdot FeO) \cdot W_2O_3$
612	Ferberite.....	604...	$MnO \cdot W_2O_3$
613	Megabasite.....	604...	$(FeO \cdot MnO) \cdot W_2O_3$
614	Scheelite.....	605...	$(MnO \cdot FeO) \cdot W_2O_3$
615	Cuproscheelite.....	606...	$CaO \cdot W_2O_3$
615	A. Cuprotungstite.....	Ap. 2-14	$CuO \cdot W_2O_3 + 2CaO \cdot W_2O_3$ 39
616	Stolzite.....	606...	$CuO \cdot 3W_2O_3$
617	Wulfenite.....	607...	$PbO \cdot W_2O_3$
617	A. Eosite.....	Ap. 1-5	$PbO \cdot MoO_3$
618	Pateraite.....	608...	$V_2O_5 \cdot MoO_3 \cdot PbO$ 1,3
619	Dechenite.....	609...	$CoO \cdot MoO_3$
620	Descloizite.....	609...	$(PbO \cdot ZnO) \cdot V_2O_5$
621	Vanadinite.....	610...	$Pb^2O_2 \cdot V_2O_5$ 24
622	Volborthite...[Copper]	611...	$3PbO \cdot V_2O_5 + \frac{1}{2}PbCl$
622	A. Vanadate of Lime &	612...	$CuO \cdot V_2O_5 \cdot H$ 34
622	B. Vanadilolite.....	Ap. 1-16	$(CuO \cdot CaO)^4 \cdot V_2O_3 + aq.$
623	Chileite.....	612...	$\{3R \cdot O \cdot SiO_2 + Ca_6(V)O_4 + 2V_2O_5\}$
623	A. {A. Vanadate from the Lake Superior Copper Regions...}	612...	$\{Pb^5O \cdot V_2O_3 + Cu^5O \cdot V_2O_3\}$ 2
624	Pucherite.....	Ap. 1-12	$V_2O_3 \cdot FeO_3 \&c.$ 21
624	A. Uranosphærite.....	Ap. 2-57	$BiO_3 \cdot V_2O_5$
625	Sulphatite.....	614...	$BiO_3 \cdot 2UO_3 + 3H$
626	Taylorite.....	614...	$H_2O \cdot SO_3$
627	Aphthitalite.....	615...	$(\frac{5}{3}K_2O + \frac{1}{3}NH_4O) \cdot SO_3$
628	Miscenite.....	615...	$K_2O \cdot SO_3$
629	Thenardite.....	615...	$K_2O \cdot SO_3 + H_2SO_3$
630	Barite.....	616...	$NaO \cdot SO_3$
631	Celestine.....	619...	$BaO \cdot SO_3$
632	Anhydrite.....	621...	$SrO \cdot SO_3$
633	Anglesite.....	622...	$CaO \cdot SO_3$ 1
634	Binkosite.....	624...	$PbO \cdot SO_3$
634	A. Hydrocyanite.....	Ap. 2-29	$S_2O_3 \cdot ZnO$
634	B. Dolerophanite.....	Ap. 2-17	$CuO \cdot SO_3$ 19
635	Leadhillite.....	624...	Cu_2AsO_3
			$PbO \cdot SO_3 + 3PbO \cdot CO_2$

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
26 to 24, 5..	31..	D..	2-2.5..	3.1..	2.5..	IV.
59, 5..	71..	T..		5.8..		V.
26, 5..		Tr..		3.3..		V.
4..		W..	2.3..	3.45..		III.
64, 1..			6..			M..
21, 57, 3..				3.194..		C..
19, 6..			Soft..			C..
7, 3..	72..		4..	2.53..		
3, 8..	59..		3.5..	2.7..	E..	M..
3, 4, 59..	59..	Z..	5..	6.82..	E..	
3, 5, 8..	70..	F..	3..	2.03..	E..	A..
5 to 3, 8..			2-3..	2.2-2.5..	F..	
1, 34, 4, 2, 8..	72..	D..	3.5-4.5..	4-4.3..	F..	VI.
36 to 43, 4..	72, 19, 1..		2-2.5..		E..	III.
5 to 5, 8..	72..		5..	3.3..	6..	III.
2..	59, 31..		5-5.5..	3.4-3.53..	E..	IV.
8, 5..	70..	F..	4..	4.7..	E..	A..
5..	70..		4..	3.52..	E..	IV.
1..	72..		2..	1.93..	E..	IV.
1..	72..		1.5-2..	2.2..	E..	III.
1, 7..					F..	M..
1..						A..
5 to 1..	31..	T..	1..	1.48..	1..	VI.
1, 5..			3-4..	3..	E..	
7, 1..	79..	U..	3..	3.42..	2..	
5, 4, 6..	21, 4..	79..	K. U..	5..	3.9-4..	
8 H..	1..	L..	2..	1.9-2..	E..	F..
1, 7, 4..	72..		4.5-7..	2.97..	2..	I..
4, 7, 5..	76..			2.78..		M..
1..	72..		8..	3.3-4..	6..	I..
7, 1..	72..		2.5..	1.72..	E..	V..
1, 64..				2.26-2.29..	3..	C..
1..	sub. 72..		3.5..	2.55..	E..	A..
1..			2-3..		E..	
1..	79..	U..	1..	1.65..	1..	
1..		P..			1..	
1..					F..	
5..						
8, 2..	sub 73..	E..	3-4..	3.4..		V?
2..	2..	E..	5.5..	7.3..	3..	V..
8, 3..	71..	E..	4.5..	7.1..	E..	V..
2..	2..	E..	5.5..	7.3..	3..	V..
8..	sub. 73..	E..	3.5-4..	6.4-6.9..	E..	V..
1, 8, 4, 3..	72..		4.5-5..	6..	5..	II..
4 to 34, 35..	72..	ct..	4.5-5..		F..	G..
5, 4..	75, 4, 5..		4..		E..	A..
8, 5 to 3..	70..		3..	7.9..	2..	II..
3 gen'lly 5..	70..	B..	3..	6.9..	1.5..	II..
21, 3..	8, 5..		3-4..			II..
2..					F..	A..
3..	78..		3-4..	5.7..	E..	M..
4, 8 to 2..			3.5..	5.8..	E..	IV..
8 or 5..	70..		2.75-3..	6.8..	E..	III.
4 to 26, 5..	31..	D..	2-3.5..	3.5..	E..	III.
4, 5..				3.495..		
21, 4..	7, 4..	72, 75..		3.96..	F..	
21, 8, 2..					E..	
8 or 3, 5..						
3, 8..	72, 71..	D..	4..	5.91..	E..	IV..
5..	5..	Rad..	2.3..	6.36..		
23..			Liquid..	1.85..		
5, 1..		Cry..	2..		D..	
1..	72..		3..	1.73..	E..	IV..
1..					E..	F..
1..	72..		2-3..	2.55..	E..	IV..
1, 5, 6..	72..	D, W..	2.5-3.5..	4.5..	3..	IV..
23, 1, 6..	72..	D, W..	3-3.5..	3.9..	3..	IV..
7, 57, 3..	31, 72..	H..	3-3.5..	2.899..	F..	III.
1..	71..	Z..	3..	6.1-6.3..	1.5..	IV.
3, 4, 8, 6..				4.330..		III.
8..					F..	III.
1, 5, 7..	31 to 70..	E..	2.5..	6.3..	1.5..	IV.





Species No.	SPECIES.	Pages in Dana.	COMPOSITION.
635	A. Maxite.....	Ap. 2-38	$\text{PbO SO}_2 \cdot \text{PbO CO}_2 \cdot \text{PbO}$ $\{ 3 \text{ PbO SO}_3 + 2 \text{ PbO}$ $\text{CO}_2 + \text{CuO CO}_2 \dots$
636	Caledonite.....	625...	$\text{CaO SO}_3 + 3 \text{ BaO SO}_3$
637	Dreelite.....	626...	$\text{PbO SO}_3 + 3 \text{ PbO CO}_2$
638	Susannite.....	626...	$\text{CuO SO}_3 \cdot \text{CuCl}$
639	Connellite.....	627...	$\text{NaO SO}_3 + \text{CaO SO}_3$
640	Glauberite.....	627...	$\text{PbO SO}_3 + \text{PbO CO}_2$
641	Lanarkite.....	628...	PbO CrO_3
642	Crocoite.....	628...	$\text{Pb}^3\text{O Cr}^2\text{O}_3$
643	Phenicochroite.....	630...	$\text{CuO}^3\text{Cr}^2\text{O}_3 + \text{PbO}^3\text{Cr}^2\text{O}_3$
644	Vauquelinite.....	630...	$\text{CrO}_3 \cdot \text{PbO ZnO}$
645	Jossaite.....	631...	$\text{FeO, FeO}_3, \text{SO}_3$
646	Pettkoite.....	631...	$\text{AlO}_3 \cdot 2 \text{SO}_3$
647	Alumian.....	631...	$\text{NH}_4\text{O SO}_3 + \text{H}$
650	Mascagnite.....	635...	$\text{NH}_4\text{O, SO}_3, \text{MgO}$
651	Boussingaultite.....	635...	$\text{RO SO}_3 + 2 \text{H}$
652	Leontite.....	635...	$\{ \text{NH}_4\text{O SO}_3 + 2 \text{KO}$ $\text{SO}_3 + 3 (\text{KSO}_3 \cdot \text{H}_2\text{O})$ $\text{SO}_3 + 4 \text{aq.} \dots$
652	A. Guanovulite.....	Ap. 2-64	$\text{NaO SO}_3 + 10 \text{H}$
653	Mirabilite.....	636...	$\text{CaO SO}_3 + 2 \text{H}$
654	Gypsum.....	637...	$\text{MgO SO}_3 + \text{H}$
655	Kieserite.....	641...	$\{ \text{KSO}_3 + \text{MgO SO}_3$ $+ 2 \text{CaO SO}_3 + 2 \text{H} \dots$
656	Polyhalite.....	641...	$\text{CaO SO}_3 \cdot \text{KO SO}_3 + \text{H}$
656	A. Syngenite.....	Ap. 2-54	KO, MgO CaO SO_3
657	Mamanite.....	642...	$(\text{KO, MgO}) \text{SO}_3 + 3 \text{H}$
658	Picromerite.....	642...	$(\text{MgO NaO}) \text{SO}_3 + 2 \text{H}$
659	Bloedite.....	643...	$(\text{MgO NaO}) \text{SO}_3 + 2 \text{H}$
659	A. Simonyite.....	Ap. 1-14	$(\text{MgO NaO}) \text{SO}_3 + \text{Aq.}$
660	Loeweite.....	643...	$\text{MgO SO}_3 + 7 \text{H}$
661	Epsomite.....	643...	$\text{FeO SO}_3 + \text{H}$
662	Tauriscite.....	644...	$\text{SO}_3 \cdot \text{FeO}_3 \cdot \text{H}$
662	A. Tecticite.....	644...	$\text{Zn}^3\text{O AsO}_5 + \text{ZnO H}$
663	Tauserite.....	645...	$\text{FeO SO}_3 + 7 \text{H}$
664	Melanterite.....	646...	$(\text{FeO, CuO}) \text{SO}_3 + 7 \text{H}$
665	Pisanite.....	646...	$\text{ZnO SO}_3 + 7 \text{H}$
666	Goslarite.....	647...	$\text{CoO SO}_3 + 7 \text{H}$
667	Bieberite.....	647...	$\text{NiO SO}_3 + 7 \text{H}$
668	Morenosite.....	648...	$\text{CuO SO}_3 + 5 \text{H}$
669	Chalcanthite.....	648...	$(\text{CuO MgO}) \text{SO}_3 + 7 \text{H}$
669	A. Cupromagnesite...	Ap. 2-14	$(\frac{1}{2} \text{CuO} + \frac{1}{2} \text{KO}) \text{SO}_3 + 3$
670	Cyanochroite.....	649...	$\text{AlO}_3 \cdot 3 \text{SO}_3 + 18 \text{H}$
671	Alunogen.....	649...	$\text{FeO}_3 \cdot 3 \text{SO}_3 + 9 \text{H}$
672	Coquimbite.....	650...	$\{ \text{NH}_4\text{O SO}_3 + \text{AlO}_3$ $3 \text{SO}_3 + 24 \text{H} \dots$
673	Tschermigite.....	651...	$\text{KSO}_3 + \text{AlO}_3 \text{S}^3\text{O}_3 + 24$
674	Kalinite.....	652...	$\text{FeOSO}_3 + \text{FeO}_3 \text{S}^3\text{O}_3 + 24$
675	Voltaite.....	652...	$\text{FeO}_3 \text{SO}_3 \text{H}$
676	Blakeite.....	652...	$\text{NaOSO}_3 + \text{AlO}_3 \text{S}^3\text{O}_3 + 22$
677	Mendozite.....	653...	$\text{MgOSO}_3 + \text{AlO}_3 \text{S}^3\text{O}_3 + 22$
678	Pickeringite.....	653...	$\text{MnOSO}_3 + \text{AlO}_3 \text{S}^3\text{O}_3 + 24$
679	Apjohnite.....	653...	$\{ \text{MnO MgO} \} \text{SO}_3 + \text{Al}$ $\text{O}_3 \text{S}^3\text{O}_3 + 22 \text{H} \dots$
680	Bosjemanite.....	654...	$\text{FeOSO}_3 + \text{AlO}_3 \text{S}^3\text{O}_3 + 22$
681	Halotrichite.....	654...	$\text{RO SO}_3 + \text{FeO}_3 \text{S}^3\text{O}_3 + 12$
682	Roemerite.....	655...	$\text{Fe}^2\text{O}_3 \text{S}^2\text{O}_3 + 18 \text{H}$
683	Copiapite.....	655...	$2 \text{FeO}_3 \cdot 3 \text{SO}_3 + 7 \text{H}$
684	Raimondite.....	656...	$\text{SO}_3 \text{SiO}_2 \text{AsO}_5 \text{FeO}_3 \text{PbO}$
684	A. Pastreite.....	656...	$3 \text{FeO}_3 \cdot 5 \text{SO}_3 + 27 \text{H}$
685	Fibroferrite.....	656...	$3 \text{FeO}_3 \cdot 5 \text{SO}_3 + 2 \text{H}$
686	Apatelite.....	657...	$\text{FeO, FeO}_3, \text{SO}_3, \text{H}$
687	Botryogen.....	657...	$2 \text{NaOSO}_3 + \text{FeO}_3 \text{S}^2\text{O}_3 + 2$
687	A. Bartholomite.....	Ap. 2-6	$\text{AlO}_3 \text{SO}_3 + 9 \text{H}$
688	Aluminite.....	658...	$\{ \text{AlO}_3 \cdot 3 \text{SO}_3 + 6 (\text{CaO}$ $\text{H}) + 26 \text{aq.} \dots$
688	A. Ettringite.....	Ap. 2-19	$\text{KSO}_3 + 3 \text{AlO}_3 \text{SO}_3 + 5$
689	Alunite.....	658...	$\text{KSO}_3 + 3 \text{AlO}_3 \text{SO}_3 + 9$
690	Löwigite.....	659...	$\{ (\text{KO NaO}) \text{SO}_3 + 4$ $\text{FeO}_3 \text{SO}_3 + 9 \text{H} \dots$
691	Jarosite.....	660...	$\text{FeO}_3 \text{SO}_3 \text{H}$
692	Carphosiderite.....	661...	$\text{Al}_2\text{O}_3 \text{SO}_3 + 15 \text{H}$
693	Paraluminite.....	661...	$\text{AlO}_3 \text{FeO}_3 \text{SO}_3 \text{H}$
694	Pissophanite.....	661...	$\text{Al}^2\text{O}_3 \text{SO}_3 + 10 \text{H}$
695	Felsobanyite.....	662...	$\text{Fe}_2\text{O}_3 \text{SO}_3 + 6 \text{H}$
696	Glockerite.....	662...	$\{ \text{SO}_3 \text{PbO MnO MgO}$ $\text{CaO NaO KOH} \dots$
697	Lamprophanite.....	663...	$\text{PbO SO}_3 + \text{CuO H}$
700	Linarite.....	663...	$\text{CuO SO}_3 + 2\frac{1}{2} \text{CuOH}$
701	Brochantite.....	664...	$\text{CuO SO}_3 + 3 \text{CuOH} + \text{I}$
702	Langite.....	665...	$\text{SO}_3, \text{AlO}_3 \text{CuO, H}$
703	Cyanotrichite.....	666...	

LISTS' AGENCY CATALOGUE.

	Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
2H	23.	31.	Tr.	2.5-3.	6.87.	E.	III.
2H	21, 36, or 6, 4	72.	H.	2.5-3.	6.4.	E.	III.
3H	1.	31, 1.	I.	3.5.	3.2-3.4.		VI.
2H	1, 5, 7.	70.	D.	2.5.	6.5.	1.5.	III.
2H	6.	72.					VI.
2H	5 to 7.	72.		2.5.	2.7.	1.5.	V.
2H	4, 1, to 5, 7.	71.	D. W.	2.5.	6.3-7.	E.	V.
2H	32, 3.	72.	E.	2.5-3.	6.	1.5.	V.
2H	32, 3.	70.	W.	3.-3.5.	5.7.	E.	IV.
2H	2 to 34, 4.	71, 70.		2.5-3.	5.6.	E.	V.
2H	72, 59.		E.	3.0.	5.2.		III.
2H	2.			2.5.		F.	
2H	1.	72.		2-3.	2.74.		?
2H	1, 7, 5.	72.		2.	1.7.	V.	IV.
2H	23.	72.		2-2.5.		S.	III.
2H	5, 1.	79.		2.	2.3-2.6.	E.	
2H	1.	72.		1.5-2.	1.48.	E.	V.
2H	23, 1, 7.	79, 72.	in 3 dirns	2.	2.3.	2.5-3.	V.
2H	1.	66.		2.5.	2.51.	E.	IV.
2H	5 to 57, 3.	72.		2.5.	2.77.	1.5.	IV?
2H	61, 1.					F.	IV.
2H	1.	79.	L. U.			1.5.	
2H	1.	79.		2.5.		E.	IV.
2H	1, 56, 3.					E.	V.
2H	23 to 6, 4, 5.			2.5.	2.24.	E.	V.
2H	5, 1, 3.	72.		2.5.	2.37.	E.	II.
2H	23, 1.	72.		2.25.	1.7.	E.	IV.
2H	4.			2.	1.8.		III.
2H	63, 8.						M.
2H	58 to 45, 5.	72.	ct.	2-2.5.	1.89.	E.	IV.
2H	4.			2.	1.8.		V.
2H	6.	72.	cry.			F.	
2H	1.	72.	E.	2-2.5.	1.95.	E.	IV.
2H	48, 53, 3.	72.			1.92.	F.	IV.
2H	43, 4 to 6, 4.	72.		2.	2.		
2H	40, 6.			2.5.	2.21.	E.	VI.
2H	6, 4.						IV.
2H	6.						IV.
2H	5, 3, 1.	79.		1.5-2.	1.7.		V.
2H	1 to 5.			2.5.	2.		III.
2H	23 to 1.	72.		1-2.	1.50.	S.	I.
2H	1.	72.		2.25.	1.75.	E.	I.
2H	2, 21, 4.	72.					I.
2H	1.			3.	1.88.	E.	M.
2H	1, 5.	79.		1.		E.	IV?
2H	1.	79.				E.	M.
2H						E.	IV?
2H	5, 1.	79.	U.			E.	
2H	5, 8.			2.75.	2.17.		V.
2H	24, 5.	31.		1.5.	2.14.		III.
2H	45, to 44, 5.	31.		3.	3.19.		III.
2H	5.			1.5.	1.84.		A.
2H	1 to 19, 5.						F.
2H	44, 5 to 3.			2.5.	2.04.		V.
2H	1.	66.		1-2.	1.66.		
2H			W. E.	2.	1.75.		VI.
2H	1, 7.	72.	D.	3.5-4.	2.6.		III.
2H	19, 5.		Z.	3-4.	2.58.		M.
2H	44, 5.			3.	3.2.	F.	III.
2H	46, 5.	70.		4.	2.5.		M.
2H	1 to 19, 5.						M.
2H	19 to 34, 4.	72.		1.5.	1.96.		
2H	1, 5.	31.	W.	1.5.	2.33.		IV.
2H	8, 5, 4, 2.	70.	G.				M.
2H	1.	31, 1.	L.	3.	3.07.		
2H	33, 6.	72.	E.	2.5.	5.4.	E.	V.
2H	37 to 2, 4.		E.	3.5-4.	3.4-3.9.	E.	IV.
2H	4, 6.			2.5-3.	3.5.	F.	IV.
2H	6.	31.					



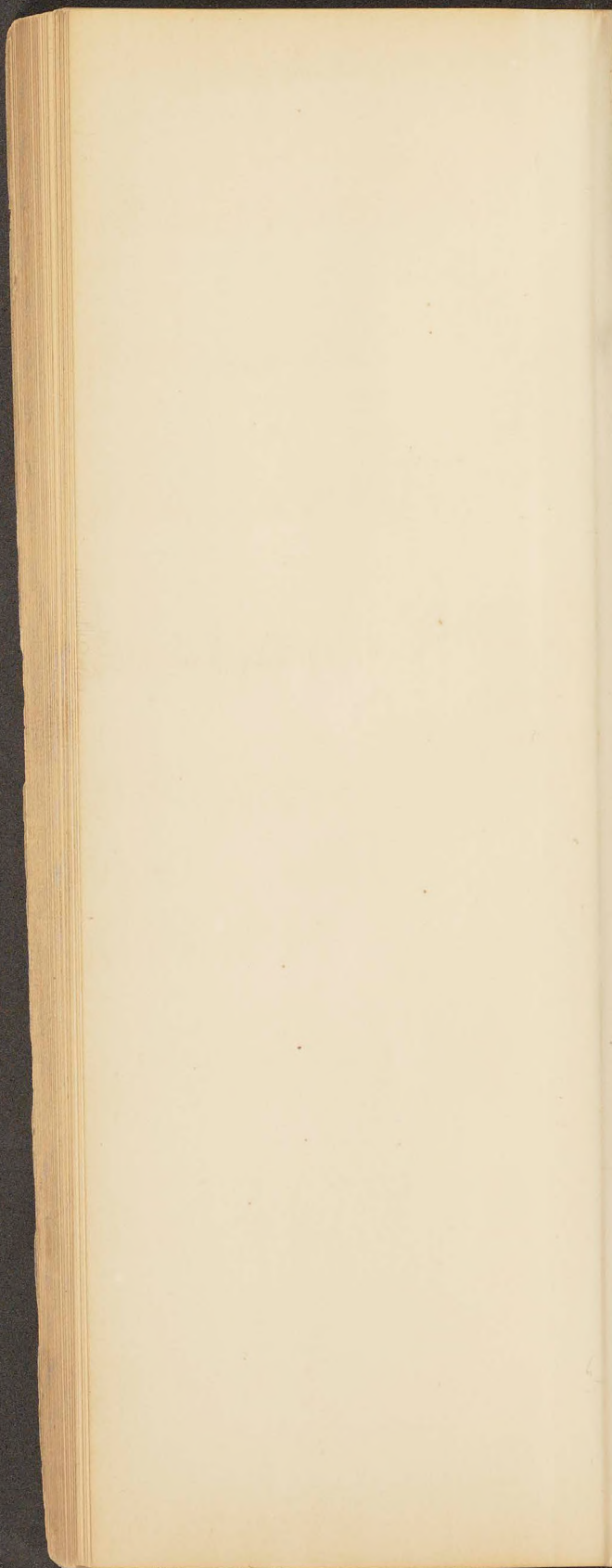


TABLE OF MIN

Species No.	SPECIES.	Page in Dana.	COMPOSITION.
704	Woodwardite.....	666...	$\text{CuO SO}_3, \text{CuOH}, \text{AlO}_3 \text{H}_3, 6\text{H}$
705	Johannite.....	666...	$\{ (\text{U}_3 \text{O U O}_3) \text{S O}_3 + \frac{1}{2} \}$ $\{ \text{Cu}_3 \text{O S O}_3 + 1 \frac{1}{2} \text{H} \dots \}$ $\{ (\frac{2}{3} (\text{U}_3 \text{O U O}_3) + \frac{1}{3} \text{Ca}_3 \text{O}) \}$ $\text{S O}_3 + \frac{1}{2} \text{CuO SO}_3 + 9\text{H}$
706	Uranochalcite.....	667...	$\text{U O}_3 \text{S O}_3 + \text{Ca}_3 \text{O S O}_3 + 15\text{H}$
707	Medjidite.....	667...	$\text{U O}_3, \text{S O}_3, \text{H} \dots$
708	Zippeite.....	667...	$(\text{U}_3 \text{O U O}_3) 2\text{S O}_3 + 2\text{H} \dots$
709	Voglianite.....	668...	$\text{U}_3 \text{O}_3 \text{S O}_3 + 14 \text{H} \dots$
710	Uraconite.....	668...	$\text{Bi O}_3 \text{Te O}_3 + 2 \text{H} \dots$
711	Montanite.....	668...	$\text{Se O}_3, \text{Pb O} \dots$
712	Kerstenite.....	669...	$\text{Ca O C O}_2 \dots$
715	Calcite.....	670...	$\text{Mg O C O}_2 + \text{Ca O C O}_2 \dots$
716	Dolomite.....	681...	$\{ \text{CaO CO}_2 + (\text{MgO}, \text{FeO}, \text{Mn O}) \text{C O}_2 \dots \}$
717	Ankerite.....	685...	$\text{Mg O C O}_2 \dots$
718	Magnesite.....	685...	$2 \text{Mg O C O}_2 + \text{Fe O C O}_2 \dots$
719	Mesitite.....	687...	$\text{Mg O C O}_2 + \text{Fe O C O}_2 \dots$
720	Pistomesite.....	688...	$\{ \text{Fe O C O}_2, (\text{with Mn O}), \text{Ca O Mg O} \} \dots$
721	Siderite.....	688...	$\text{Mn O C O}_2 \dots$
722	Rhodochrosite.....	691...	$\text{Zn O C O}_2 \dots$
723	Smithsonite.....	692...	$\text{Ca O C O}_2 \dots$
724	Aragonite.....	694...	$2\text{MnO CO}_2 + (\text{CaO MgO}) \text{CO}_2 \dots$
725	Manganocalcite.....	697...	$\text{Ba O C O}_2 \dots$
726	Witherite.....	697...	$\text{Ba O C O}_2 + \text{Ca O C O}_2 \dots$
727	Bromlite.....	698...	$\text{Sr O C O}_2 \dots$
728	Strontianite.....	699...	$\text{Pb O C O}_2 \dots$
729	Cerussite.....	700...	$\text{Ba O C O}_2 + \text{Ca O C O}_2 \dots$
730	Barytocalcite.....	701...	$\{ (\text{Ce O}, \text{La O}, \text{DiO}) \text{CO}_2 + \frac{1}{2} (\text{Ca}, \text{Ce}) \text{Fl} \dots \}$
731	Parisite.....	702...	$3 \text{LaO CO}_2 + \text{Ce}_2 (\text{FlO})^2 + \text{H} \dots$
732	Kischtimite.....	703...	$\text{Ce Fl} + 2 (\text{Ce O}, \text{La O}) \text{CO}_2 \dots$
732	A. Bastnäsité.....	Ap. 1-2	$\text{Pb O C O}_2 + \text{Pb Cl} \dots$
733	Phosgenite.....	703...	$(\frac{1}{2} \text{N H}_4 \text{O} + \frac{1}{2} \text{H O}) \text{CO}_2 \dots$
735	Teschemacherite.....	705...	$\text{Na O C O}_2 + 10 \text{H} \dots$
736	Natron.....	705...	$\text{Na O C O}_2 + \text{H} \dots$
737	Thermonatrite.....	705...	$2 \text{Na O C O}_2 + 4 \text{H} \dots$
738	Trona.....	706...	$\text{NaO CO}_2 + \text{CaO CO}_2 + 5\text{H} \dots$
739	Gay-lussite.....	706...	$3 (\text{MgO CO}_2 + \text{H}) + \text{MgOH} \dots$
740	Hydromagnesite.....	707...	$(\text{Ca O Mg O}) \text{C O}_2 + \frac{1}{2} \text{H} \dots$
741	Hydrodolomite.....	708...	$2 \text{Ca O C O}_2 + \text{Mg O H} \dots$
742	Predazzite.....	708...	$\text{Ca O C O}_2 + \text{Mg O H} \dots$
743	Pencatite.....	708...	$\text{Ca O C O}_2 + \frac{1}{2} \text{H} \text{CO}_2 + \text{aq} \dots$
744	Hovite.....	709...	$\text{La O C O}_2 + 3 \text{H} \dots$
745	Lanthanite.....	709...	$\text{Yt O}, \text{C O}_2 \dots$
746	Tengerite.....	710...	$\text{Ni O C O}_2 + 2 \text{Ni O H} + 4 \text{H} \dots$
747	Zaratite.....	710...	$\text{Co O C O}_2 \text{H} \dots$
748	Remingtonite.....	711...	$\text{Zn O C O}_2 + 2 \text{Zn O H} \dots$
749	Hydrozincite.....	711...	$\text{Cu O}, \text{Zn O}, \text{C O}_2, \text{H} \dots$
750	Aurichalcite.....	712...	$\text{S O}_3, \text{Zn O}, \text{Cu O}, \text{C O}_2, \text{H} \dots$
750	A. Zinkazurite.....	713...	$\text{Cu O C O}_2 + \text{Cu O H} \dots$
751	Malachite.....	713...	$\text{C O}_2, \text{Cu O Fe O}_3 \dots$
751	A. Mysorin.....	715...	$\text{C O}_2, \text{Cu O}, \text{S O}_2, \text{Ca O Fe O}_3 \dots$
751	B. Lime Malachite.....	715...	$2 \text{Cu O C O}_2 + \text{Cu O H} \dots$
752	Azurite.....	715...	$\text{Bi O}_3, \text{C O}_2, \text{H} \dots$
753	Bismutite.....	716...	$\text{U O}_3 \text{C O}_2 + \text{CaO CO}_2 + 20\text{H} \dots$
754	Lieligite.....	717...	$\{ 2 \text{U O C O}_2 + 2 \text{CaO CO}_2 \}$ $+ 3 \text{Cu O } 2 \text{CO}_2 + 14 \text{H} \}$
755	Voglite.....	717...	$\text{C O}_2 \text{U O H} \dots$
755	A. Schröckerite.....	Ap. 2-50	$\text{Oxalate of Ca O} \dots$
756	Whewellite.....	718...	$\text{Oxalate of Ca O} \dots$
757	Thierschite.....	718...	$\text{Oxalate of Fe O} \dots$
758	Humboldtine.....	718...	

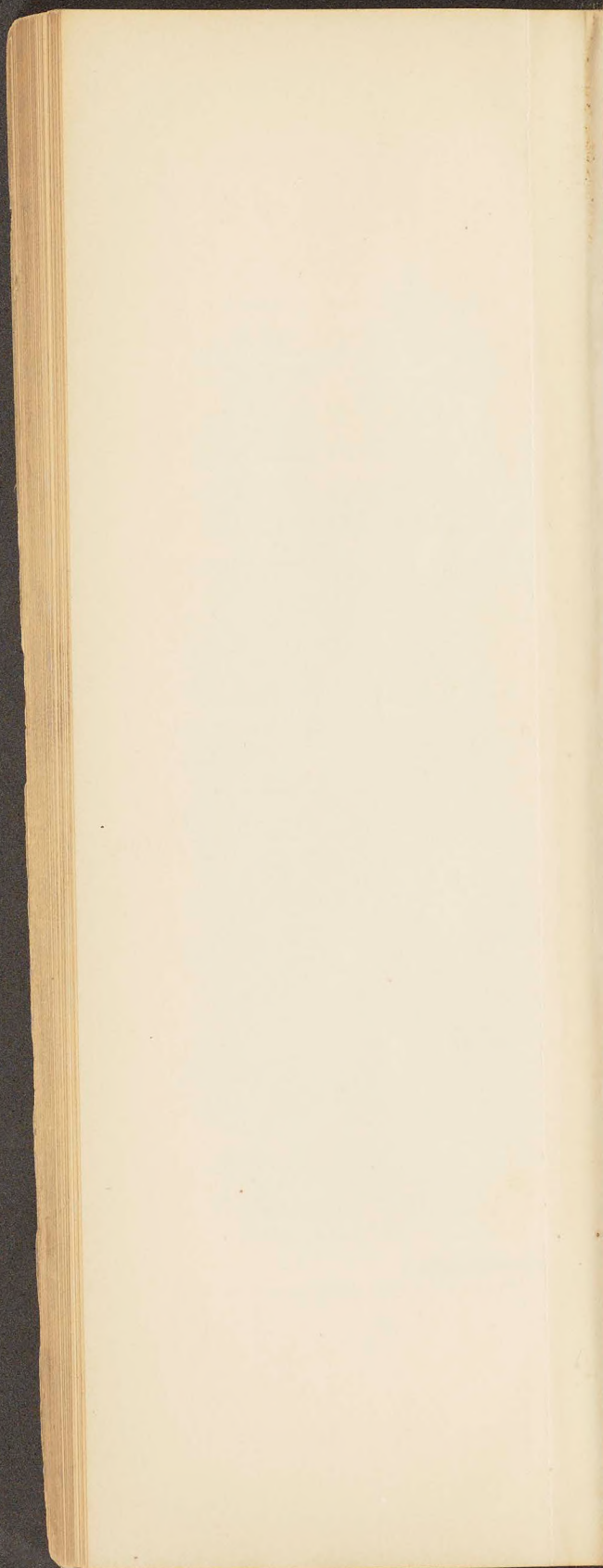
(VI.) Hydrocarb

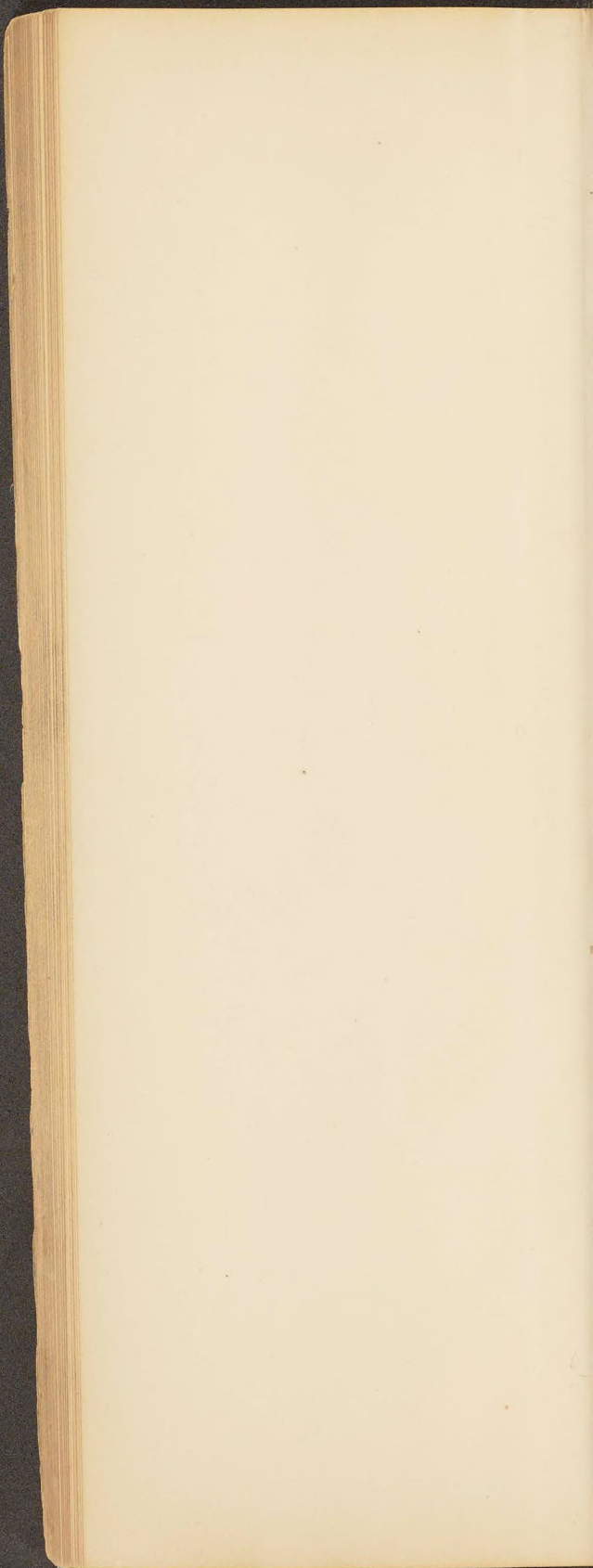
761	Tetrylic Hydrid.....	720...	} Petroleum Oils.....
762	Pentylic Hydrid.....	720...	
763	Hexylic Hydrid.....	720...	
764	Heptylic Hydrid.....	720...	
765	Octylic Hydrid.....	720...	
766	Nonylic Hydrid.....	720...	
767	Beta-Naphtha Group	720...	
768			
769			
770			
771			
772	Scheererite.....	727...	C H ₄
773	Chrismatite.....	728...	C ₂ H ₆

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
6-4, 6...	...	...	...	...	...	...
37, 4...	72	72	2-2.5	3.10	F	IV.
38, 4...	...	...	2-2½	...	...	A.
83...	...	J.	2.5	...	...	M.
5...	79	...	3	...	...	...
39 to 36, 4...	19, 4...	...	...	...	...	...
26 5...	...	...	...	...	...	A.
5, 1...	...	...	soft	...	E.	...
24 5...	72, 78...	ct. F.	3-4	...	E.	M.
23, 1, and —	72	I.	3	2.6-2.8	...	III.
1, 7, 8, etc...	72 to 31	I.	3.5-4	2.8-2.9	...	III.
1, 7, 3...	72	I.	3.5-4	2.95-3.1	...	III.
1, 5, 7, 8, 4...	72	I.	3.5-4.5	3-3.1	...	III.
5, 1, 7, 8...	72 to 31	I.	4-4.5	3.35	...	III.
5, 1 to 5, 7...	31	I. C.	3.5-4	3.41	...	VI.
47, 7 to 8, 3	72 to 31	I.	4	3.6-3.9	4.5	III.
53, 3, 7, 8...	72 to 31	I.	3.5-4.5	3.5	...	III.
1, 7, 4, 6, 5, 3	72	...	5	4.4	...	III.
23, 1, 5, 3, 6	72	...	3.5-4	2.9-3	...	IV.
66, 3...	72	...	4-5	3.637	...	Col.
1, 7...	72	...	3.5	4-3	2	IV.
1, 23, 7, 19, 9	72	C. H.	4-4.5	3.718	6	III.
1, 7, 5, 4...	72	E.	3.5-4	3.7	6	IV.
1...	72 to 71	Z.	3.5	6.4	E.	IV.
1, 7, 5, 4...	72	E.	4	3.6	6	V.
8, 5...	70	D.	4.5	4.35	...	III.
21, 8, 5...	72, 78	...	...	2.784	...	A.
59 5...	78	ct.	4	4.93	...	IV?
1...	71	3 cleav.	3	6.2	E.	II.
5, 1...	...	...	1.5	1.45	V.	...
7, 1...	77	...	1.5	1.4	E.	V.
7, 1...	...	...	1.5	1.5-1.6	E.	IV.
7, 1...	...	...	2.5-3	2.11	E.	V.
1...	72, 31	...	2-3	1.99	E.	V.
1...	79, 66	...	3.5	2.1	...	V.
5, 7, 4, 1...	72	...	...	2.5	...	...
1 to 7, 1...	72	...	3.5	2.63	...	...
6, 7...	72	...	3	2.5	...	...
1...	...	G.	soft	...	...	...
7, 1, 9, 5...	31 or 66	Mi.	2.5-3	2.666	...	III.
1...	66	...	...	...	...	A.
37, 4...	72	...	3-3.25	2.6	...	...
1...	19, 53	...	soft	...	...	...
1, 7, 5...	66	...	2-2.5	3.7	...	...
6, 4...	31	...	2	...	D.	...
6...	...	...	...	3.49	...	...
38 to 37, 4...	79 to 77	U.	3.5-4	3.8	2	V.
2, 8...	...	Z.	soft	2.62	...	M.
36, 4...	79	L, U	2.5	...	...	M.
6...	72	...	4	3.7	2	V.
1 to 5...	66	...	4-4.5	6.8-7.6	E.	A.
43, 4...	...	cry	2-2.5	...	...	...
37, 4...	31	...	...	...	...	...
4, 5...	...	...	...	...	...	...
...	...	Z.	2.5-2.7	...	...	IV.
5...	66, 70	G, H.	2	2.13-2.48	E.	C.

bon Compounds.

...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
1, 7, 5, 4, 3...	31	...	soft	1-1.2	E. IV.
4 to 59, 5...	78 to 79	...	...	...	E.

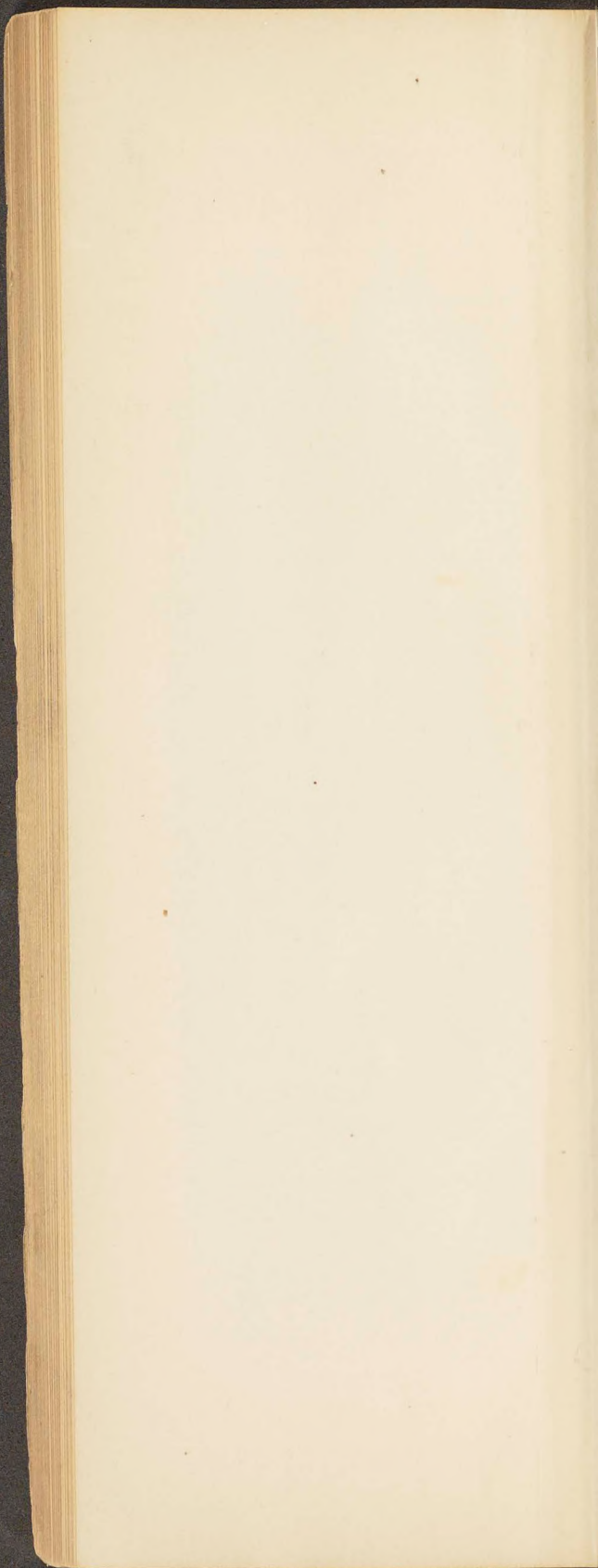


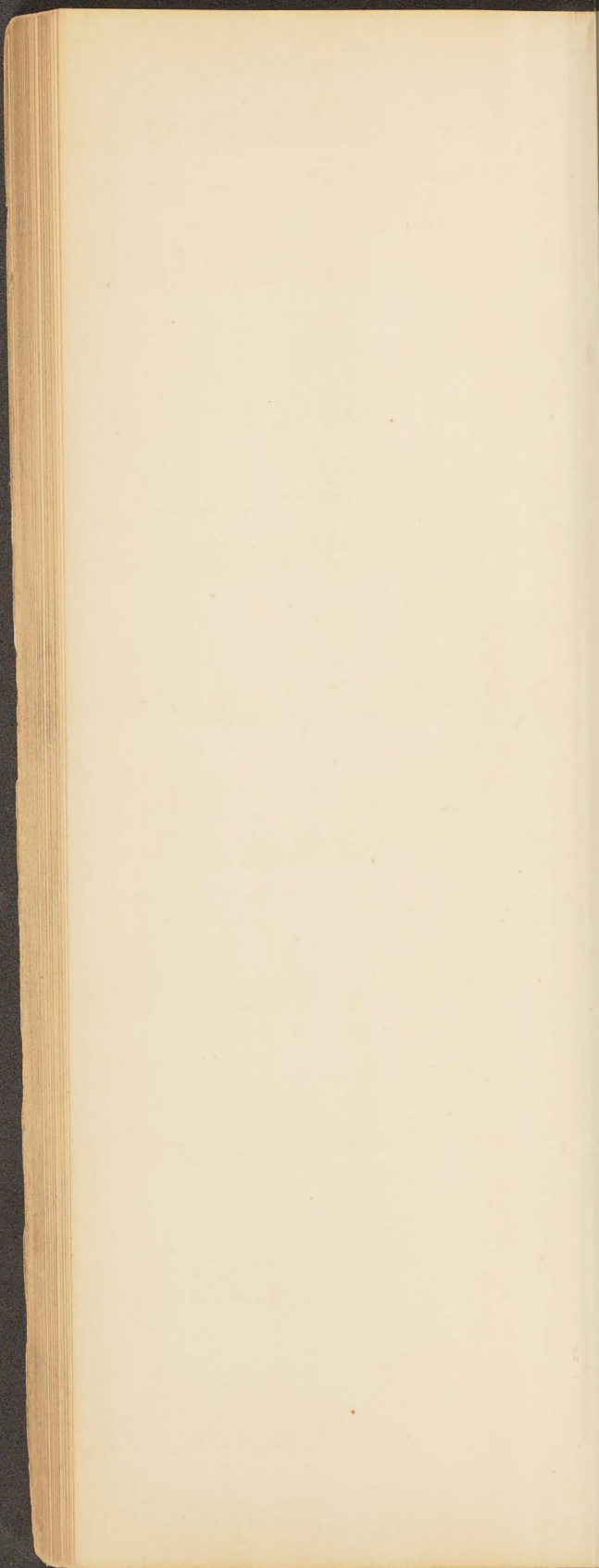


Species No.	SPECIES.	Page in Dana.	COMPOSITION.
774	Decatylene.....	729..	} Petroleum Oils.....
775	Eudecatylene.....	729..	
776	Dodecatylene.....	729..	
777	Decatritylene.....	729..	
778	Urpethite.....	731..	
779	Hatchettite.....	731..	
780	Ozocerite.....	732..	
781	Zietrisikite.....	733..	
781	A.....	733-4..	
781	B. Neft-Gil.....	734..	
781	C. Pyropissite.....	734..	} Benzole Group.....
782	Elaterite.....	734..	
783	Settling Stones Resin.....	735..	
784	Fichtelite.....	735..	
785	Hartite.....	736..	
786	Dinite.....	736..	
787	Ixolyte.....	736..	
788	Benzole.....	737..	
789	Toluole.....	737..	
790	Xylole.....	737..	
791	Cumole.....	737..	} Benzole Group.....
792	Cymole.....	737..	
793	Könlite.....	737..	
794	Naphthalin.....	738..	
795	Idrialite.....	738..	
795	A. Aragoite.....	Ap. 2-4	
796	Geocerite.....	738..	
797	Geomyricite.....	739..	
798	Copalite.....	739..	
799	Succinite.....	740..	
799	A. Krantzite.....	741..	} Benzole Group.....
799	B. Ambrosine.....	Ap. 1-1	
800	Wolchowite.....	741..	
801	Bucaramangite.....	741..	
802	Ambrite.....	741..	
803	Bathvillite.....	742..	
804	Torbanite.....	742..	
805	Xyloretinite.....	742..	
805	A. Bombicite.....	Ap. 2-8	
806	Leucopetrite.....	743..	
807	Euosmite.....	743..	} Benzole Group.....
807	A. Rosthornite.....	Ap. 1-14	
808	Scleretinite.....	744..	
809	Pyroretinite.....	744..	
810	Reussinite.....	744..	
811	Rochlederite.....	744..	
812	Schlanite.....	745..	
813	Guyaquillite.....	745..	
814	Middletonite.....	745..	
815	Stanekite.....	745..	
816	Anthracozenite.....	746..	} Benzole Group.....
817	Tasmanite.....	746..	
818	Dysodile.....	746..	
819	Hircite.....	747..	
820	Baikerinite.....	747..	
820	A. Dopplerite.....	747..	
821	Butyrellite.....	747..	
822	Geocerellite.....	748..	
823	Brücknerellite.....	748..	
824	Succinellite.....	748..	
825	Retinellite.....	748..	} Benzole Group.....
826	Dopplerite.....	749..	
827	Melanellite.....	750..	
828	Mellite.....	750..	
829	Pigotite.....	750..	
829	A. Organic Salts of Iron.....	750..	
830	Asphaltum.....	751..	
830	A. Grahamite.....	753..	
830	B. Albertite.....	753..	
830	C. Piauzite.....	753..	
830	D. Berengelite.....	753..	} Benzole Group.....
831	Mineral Coal.....	753..	
832	Azorite.....	761..	
833	Brewsterlinite.....	761..	
834	Cryptolinite.....	762..	
835	Hessenbergite.....	762..	
836	Parathorite.....	763..	
837	Pyrrhite.....	763..	
834	? Alurgite.....	764..	

LISTS' AGENCY CATALOGUE.

Color	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion.
8, 5			soft	0.885	E	
5, 1	74, 31		soft	0.916	F	M.
23 to 1			soft	0.85-0.90	F	
8			soft	0.9	E	
21, 8			soft	0.955	E	
8				0.956	E	
7, 8				0.49-0.52	E	
			soft	0.905-1.23	E	M.A
5				1.16-1.54	E	
1	78		1		E	IV.
1	78		1		E	IV.
1 to 5					E	
32, 3	78	J	1	1.008	E	A.
3, 8, 5			soft	0.88	E	A. S
1	75, 74			1.153	F	III.
1					F	
5			soft		V	
1			soft		E	
1		C	soft		E	
5, 7, 21, 8				1.010	E	
5	71		2-2.5	1.065-1.081	E	M.
5				1.002	F	
5 to 63, 8	70	Z		1.9	F	M.
5	70		1.5-2		E	M.
19, 5				1	E	
7, 5	78	Z		2	1.034	A.
66, 8				1.01		A.
			2, 25	1.18		
1				1.115		M.
23			0.5-1	1.06	F	II.
1					F	
5, 8		F	1.5	1.2-1.5		M.A
8	78			1.076		M.
2		Z	3	1.136	E	
					E	
8, 3					E	
3, 8					E	
8				1.092	E	A.
19, 5				1.6	E	M.
3, 8		F				
2					E	
3, 8		Z	2	1.18	F	
5, 4, 7				1.14-1.25		
8		Z			F	A.
					F	
7			soft			
1			soft		E	
1		F			E	
23, 1			1	1.55		III.
8						A.
8, 2			0.5	1.089		A.
2						
18 H	45, 5	Z, X	2-2.5	1.55-1.65		II.
27 H						
8, 2 & 2				1-1.8	E	A.
2			2	1.145	F	
2			1-2	1.097	E	
8, 4, 2			1.5	1.220	E	
8, 2					E	
2		Z, H	0.5-2.5	1-1.80		C. M
1			4-4.5			II.
23						
23						
6			7-7.5			IV.
3 to 2			5-5.5		6	III.
56, 5			6			I.





LIST OF UNNUM

SPECIES.	Page in Dana.	COMPOSITION.
Achremite.....	11, 152..	Pb O As ₂ O ₅ M O ₃
Agnesite.....	793..	Bi &c.....
Andrewsite.....	Ap. 1-1..	3 (Fe, P, Fe H ³) + Cu ³ P. { Sb ³ O ₃ As O ₅ + 15 H, and } { Sb ⁵ O ₃ As O ₅ + 30 H..... }
Arsenstibite.....	Ap. 2-5..	SiO ₂ CaO MgO FeO AlO ₃ CO
Barettite.....	Ap. 1-3..	Si O ₂ , Fe O ₃ , Bi O ₃
Bismutoferrite.....	Ap. 1-3..	Zn O Ca O C O ₂ H.....
Calcozincite.....	Ap. 2-11	C Fe ²
Campbellite.....	Ap. 2-11	SiO ₂ AlO ₂ FeO ₃ MgO CaO H
Catlinite.....	796..	($\frac{1}{2}$ Mn O $\frac{1}{4}$ Zn O) 2 Mn O + 2 H
Chalcophanite.....	10, 34..	C Fe ²
Chalypite.....	Ap. 2-11	Cu, As, Sb, S.....
Clarite.....	Ap. 2-12	2 R O Si ² O ₂ + Al O ₃ Si ³ O ₂ + H
Cryoconite.....	Ap. 2-13	.....
Crystallites.....	Ap. 2-14	Cr S.....
Daubreelite.....	12, 109..	Al O ₃ , Ca O, Na O, H, C O ₂
Dawsonite.....	Ap. 2-16	($\frac{2}{3}$ R ₃ O + $\frac{1}{3}$ Al O ₃) ² Si O ₂ + 3 H
Diabantite.....	10.....	Si O ₂ Fe O Al O ₃ Mg O H.....
Euchlorite.....	12, 151..	Mn ₄ Si ₃ O ₁₂ + 2 H.....
Friedelite.....	12, 151..	Si O ₂ Al O ₃ Fe O ₃
Geyselite.....	Ap. 2-24	Al O ₃ Si O ₂
Glance spar.....	Ap. 2-24	3 Pb Te + Fe Te.....
Henryite.....	Ap. 2-27	Silicate.....
Hexagonite ?.....	.....	Si O ₂ , Al O ₃ , H.....
Hydrobucholzite.....	799..	Cu O H.....
Hydrocuprite.....	Ap. 2-28	Ti O ₂ H (Vd Ca Mg Fe O).....
Hydrotitanite, Koenig.....	.....	Si O ₂ , Al O ₃ , Fe O ₃ , H.....
Hypoxanthite.....	800..	Fe ₂ S ₃ O ₁₂ + 12 H.....
Inleite.....	12, 151..	Si O ₂ Al O ₃ Fe O Ca O H.....
Kirwanite.....	800..	Ca O, S O ₃ + Ba O S O ₃
Leedsite.....	800..	.....
Lesleyite.....	800..	SiO ₂ AlO ₃ CrO ₃ CaO MgO KO
Mariposite.....	Ap. 2-37	Si O ₂ , Al O ₃ Ca O H.....
Milarite.....	Ap. 1-10	Pb O, Fe O ₃ , As O ₅ , P O ₅ , H.....
Miriqidite.....	Ap. 2-40	Al O ₃ , Fe O, Ca O, Na O Si O ₂
Monzonite.....	Ap. 1-11	4 NaO ₃ SO + 6 NaO NO ₆ + 5 H.....
Nitroglauberite.....	Ap. 2-41	.....
Opacite.....	Ap. 2-42	.....
Pealite.....	.....	.....
Psittacite.....	12, 35..	Pb O Cu O V ₂ O ₅ H.....
Pyromelane.....	803..	Ti O ₂ Fe O ₃ Al O ₃
Richmondite.....	803..	Al O ₃ P O ₅ H.....
Roscoelite.....	12, 31..	V Mica.....
Schraufite.....	.....	C ₁₁ H ₁₆ O ₂
Selbite.....	804..	.....
Sieburgite.....	Ap. 2-51	C H O.....
Silicate of Yttria.....	804..	Si O ₂ Yt O.....
Tammite.....	Ap. 2-55	W, Fe, Mn.....
Tocornalite.....	Ap. 2-56	Ag I + Hg ₂ I.....
Valaite.....	805..	C H O.....
Valleriite.....	Ap. 2-58	2 Cu S, Fe S ₃ + 2 Mg Fe + 4 H.....
Vanuxemite.....	.....	Si O ₂ Zn O Al O ₃ H.....
Vestan.....	806..	Si O ₂
Wasite.....	806..	Si O ₂ Al O ₃ Yt Fe O ₃ Ce Bi.....
Zirlite.....	Ap. 2-63	Al O ₃ H.....
Zonochlorite.....	Ap. 2-63	{ Si 36 Al 19 $\frac{1}{2}$ Fe 7 Fe 4 $\frac{1}{2}$ } Ca 22.7 Mg 2.5 H 8.5 %....

TO DETERMINE ANY MINERAL.—Test the hardness with a file, or found to be one of certain ones found in one of the columns of the Table of Color, and find that there are only crystalline form or Specific Gravity, we eliminate others, bringing it "Table of Species," and compare their qualities. Take Amethyst as in the column headed 6½ to 7 or 7-10. Its color is violet or purple 58. hardness and column 58 color is 231. It must therefore be a variety of cubes. Its hardness is 4, its color 4, its crystallization 1. Its Specific G

One will be assisted in forming an opinion as to the probable identity each column of the following tables the most common minerals form the

Of course, there is no intention or possibility of these tables being Determinative Mineralogy.

I think that the errors in the above "Table of Species" are excusable and finishing it came this summer, when I was compelled to work business. The rest of the Catalogue was mainly completed and sent to labor involved in this table, especially in the proof-reading, I should not the doubled elements by barred letters, as is done in Dana. Dots over

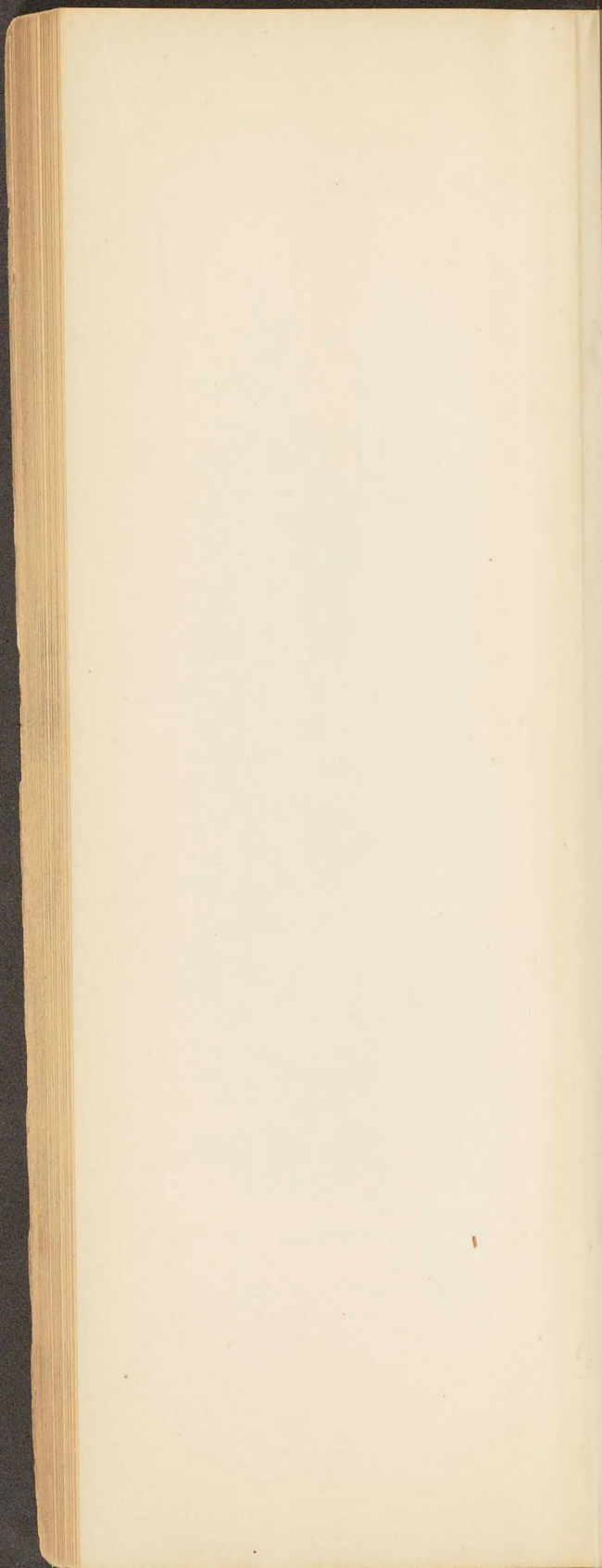
NUMBERED SPECIES.

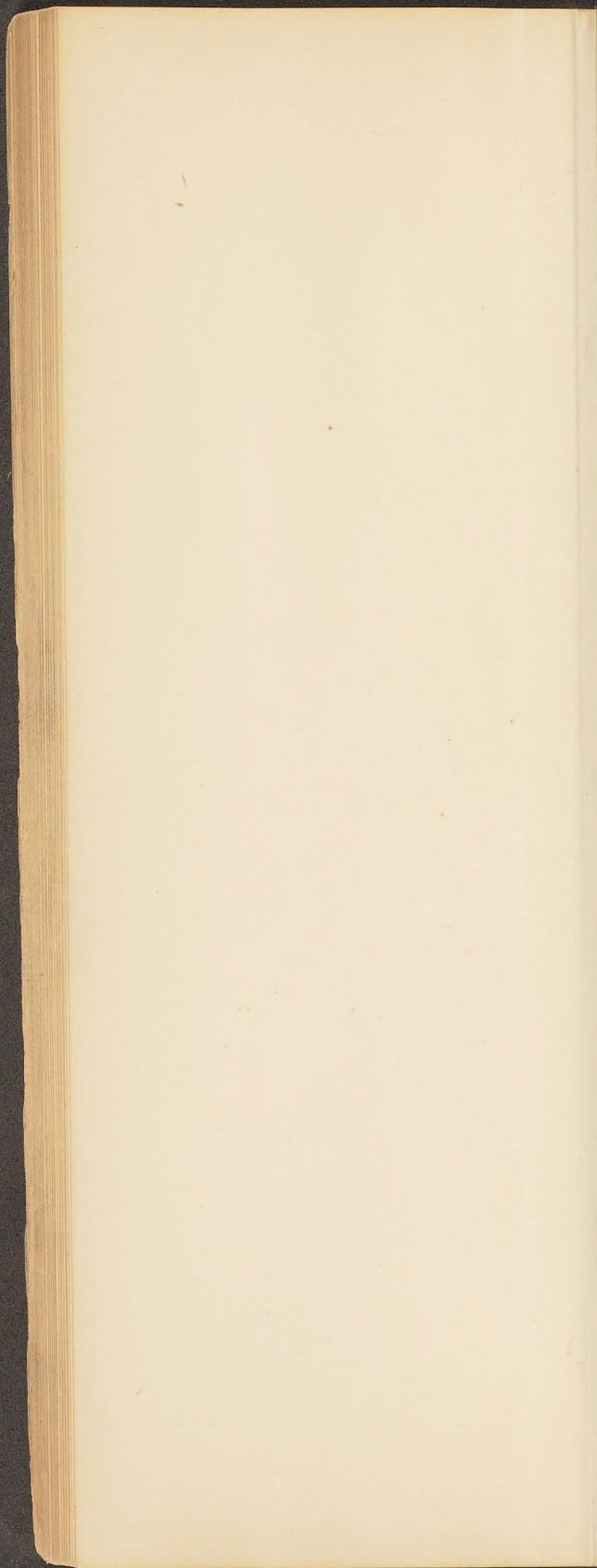
Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystallization.
61, 8	8	H. F.		4.31		VI?
6, 4				3.475		
43, 4	1		2.5	2.5		M.
19, 56, 3	26, 5	72	3.5	3.95		
3	3		soft			A.
6, 2 to 13, 2	8	Mi.	2.5	3.907	6	VI.
12, 7		W.				III.
7				2.63		IV.
2		ct.				
1	72		3	2.40		IV.
21, 4		sub. 31	2.5-3	2.71	6	
34, 4	4					
53, 3 to 9, 1	9, 1	ct.	4.75	3.07	E.	VI.
64, 1				2.49		
	31	ct.	7.5			
16, 5	75	W.	2-2.5			M II?
9						
56, 5, 3			soft			A.
5, 7			soft	3.68		P.
8, 5	5			3.46		A.
5						A.
4		U.				
		U.	soft			
19, 43, 4		T.				
23 to 4	72		5.5-6		E.	VI.
3, 8, 5	5	F.	4		E.	M VI
7, 4	72		6	3	3	M.
23		U.			F.	
2						
4					E.	A.
3, 8, 5, 2	72		6.5	3.87		
21, 8, 4	31	D.	soft	2.93	E.	M.
32, 2		Z.	2-2.8	1-1.2		A.
7						
8			5-6	4.391		
12				12.5		
19, 5, 4	5		soft		S.	A.
51, 2	74	H.	1		E.	M.
2	74	H.		3.14		M.
1			2.5-3	2.5	E.	
8, 2				2.65		V.
Different shades of 4	4		6½-7	3.113	D.	M.

or better, with the minerals in the scale of hardness. It will be Table of Hardness. Then, determining the color, we look in the only a few of this hardness in this column; then, determining the it finally down to one or two, which we find in their order in the s an example. We easily find that its hardness is 7. It must be We find that the only number found in columns 6½ to 7 or 7-10 of Quartz. As another common mineral, take green fluorspar in Gravity 3-3½. 159 is the only mineral combining these qualities. ntity of the mineral under consideration by remembering that in he first-third of each class.

ng used instead of such works as Dana's Mineralogy or Brush's

usable in view of the fact that the great amount of labor in com-ork from 5 A. M. to 10 or 11 P. M. to keep up with my retail daily to the printer in July, and had I had any idea of the amount of never have undertaken it. My printer had no type to represent r letters indicate atoms of O.





	SPECIES.	Am. J. Scien.	COMPOSITION.
a.	Ludlamite.....	..13, 318..	2 Fe ₃ P ₂ O ₈ + H ₂ Fe O ₂ + 8H
b.	Strengite.....	..13, 318..	Fe P ₂ O ₈ + 4 H.....
c.	Lawrencite.....	..13, 318..	Fe ₂ Cl ₂
d.	Hydrocastorite.....	..13, 318..	Si O ₂ 59 Al O ₃ 21 Ca O 4 H 15%
e.	Siaonite.....	..13, 319..	Bi ₂ Se.....
f.	Hatchettolite.....	..13, 365..	Cb O ₅ 66, U O 15, Ca O 7 H 5%
g.	Rogersite.....	..13, 367..	Y O 60 Cb O ₅ 18 H 17%.....
h.	Henwoodite.....	..13, 163..	P ₂ O ₅ 49 Al O ₃ 18 Cu O 7%.....
i.	Enysite.....	..13, 163..	FeSi 1 3 H 17 Al 30 Cu 17 S 8 H 39
j.	Mottramite.....	..12, 466..	(PbCu) ₃ V ₂ O ₈ + 2 H ₂ (PbCu)
k.	Daubrelite.....	..12, 396..	(Bi O ₃ 2) 4 Bi ₂ Cl ₆.....[O ₂
l.	Krönkite.....	..12, 396..	Cu O S O ₃ + Na O 2 S O ₃ + 2 H ₂
m.	Phillipite.....	..12, 396..	Cu O S O ₃ + Fe S ₃ O ₁₂ + ag..
n.	Huantajayite.....	..12, 396..	20 Na Cl + Ag Cl.....
o.	Cuprocalcite.....	..12, 396..	(Cu O 2) 2 CO ₂ + Ca O CO ₂ + H
p.	Werthemanite.....	..12, 396..	Al S O ₆ + 3 H O.....
q.	Malinowskite.....	..12, 397..	S. Sb. Ag Pb. Cu. Fe.....

a. Small transparent crystals, associated with vivianite, &c., from Corwall, Eng.

b. Spherical, drusy incrustations with cacoxenite, near

c. From Meteoric Iron.

d. Elba, from decomposition of Castorite.

e. Guanajuato.

f. With Samarskite, from N. C. resembles pyrochlore of the element Columbium. It occurs in regular octohedra; redness becomes of a greenish yellow.

g. With Samarskite, white, pearly, mammillary beads Prof. Wm. B. Rogers, first geologist of Pa. This is the first one from 10c. to \$2.00.

h. Occurs on limonite, in Cornwall, \$1 $\frac{00}{00}$ to \$5 $\frac{00}{00}$ per lb.

i. Cornwall Infus.

k. Sol in HCl; from Bolivia.

l. Sol in water, Bolivia.

m. Sol in water, from Chili.

n. B. B. decrepitates and fuses easily, losing transparency.

o. Sol in HCl, Peru.

p. Adheres to tongue, Peru.

Calcozincite, C. 37, fine granular, interpenetrated with acids, B. R. blackens, Stirling, N. J. 15c. to \$1.50 per specimen.

Euchlorite, C. 37, massive in coarse elongated scales, B. R. blackens by sulphuric acid, found at Chester, Mass., with albite, 25c. to \$1.00.

Chalcophanite, C. 37, occurs in druses of lustrous crystals grouped in stalactitic forms. In the latter case the xls are Crystals minute, B. B. turns to a yellowish brown or copper color on heating darkens in color and fuses slightly on thin edges. G. 75c. Zn O. Sol in HCl. Results from decomposition of Franklinite.

Diabantite, C. 37, occurs in amygdaloid, foliated masses of pyrosclerite; specimens from 10c. to 75c.

The minerals last described on this page are mentioned on the preceding page; directions are given for determining unnumbered minerals. The first thing one has to do to ascertain the composition and properties is to look up the species' number. By this it may be found in its properties.

Color.	Streak or Lustre.	Cleavage or Fracture.	Hardness.	Specific Gravity.	Fusibility.	Crystalliza- tion
4.....	72.....	D. ct...	3.4.....	3.12.....	.....	IV.
1 to 3. ..	72.....	Rad...	3-4.....	2.87.....	.....	III.
1.....	.....	2.....	.....	1.....	.....	F..
11, 7.....	.....	.....	3.....	6.4.....	.....	M..
5, 8.....	70.....	Sub. Z..	5.....	4.85.....	.....	I..
1.....	31.....	Cry...	3.5.....	3.3.....	.....	A..
6, 4.....	.....	Cry...	4-4.5.....	2.67.....	.....	M..
6, 4.....	.....	Cry...	2-2.24.....	1.59.....	.....	S..
2, 8.....	5, 7J.....	.....	3.....	5.89.....	.....	.....
5-7.....	.....	U.....	2.5.....	6.4.....	.....	A..
33, 4.....	92.....	U.....	.....	.....	.....	V..
33, 4.....	92.....	U.....	.....	.....	.....	M..
1.....	.....	2.....	2.....	.....	E.....	I..
1.....	.....	.....	3.....	3.9.....	.....	M..
1.....	.....	.....	.....	2.8.....	.....	A..
7.....	73.....	.....	.....	.....	.....	M..

(to which it is closely allied), siderite, arsenopyrite, pyrite,

Giessen.

. Named by Prof J. Lawrence Smith from the discoverer
 rons, showing the cubic planes and form 3-3. On heating to
 forming a crust. Named by Prof. J. Lawrence Smith after
 umbate discovered which is so largely hydrated. Specimens
 er specimen.

ry.

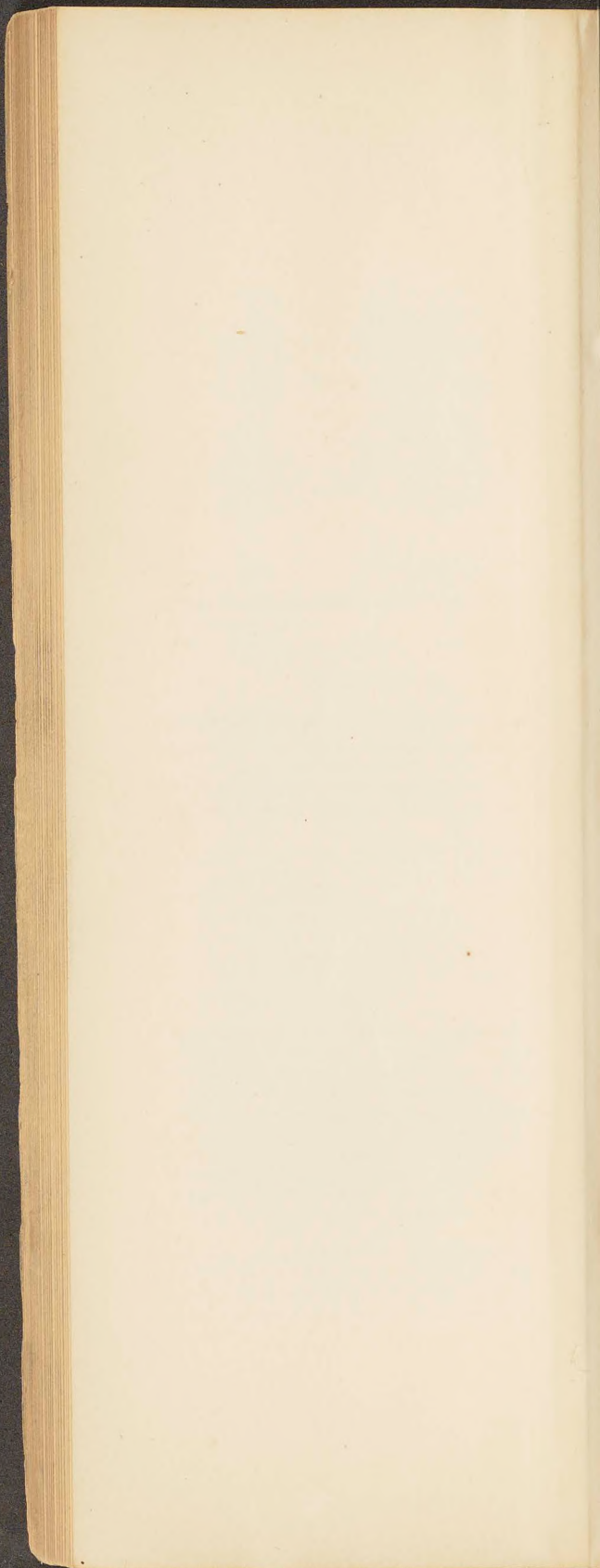
a fibres of asbestos and sussexite; effervesces slightly with
 en.

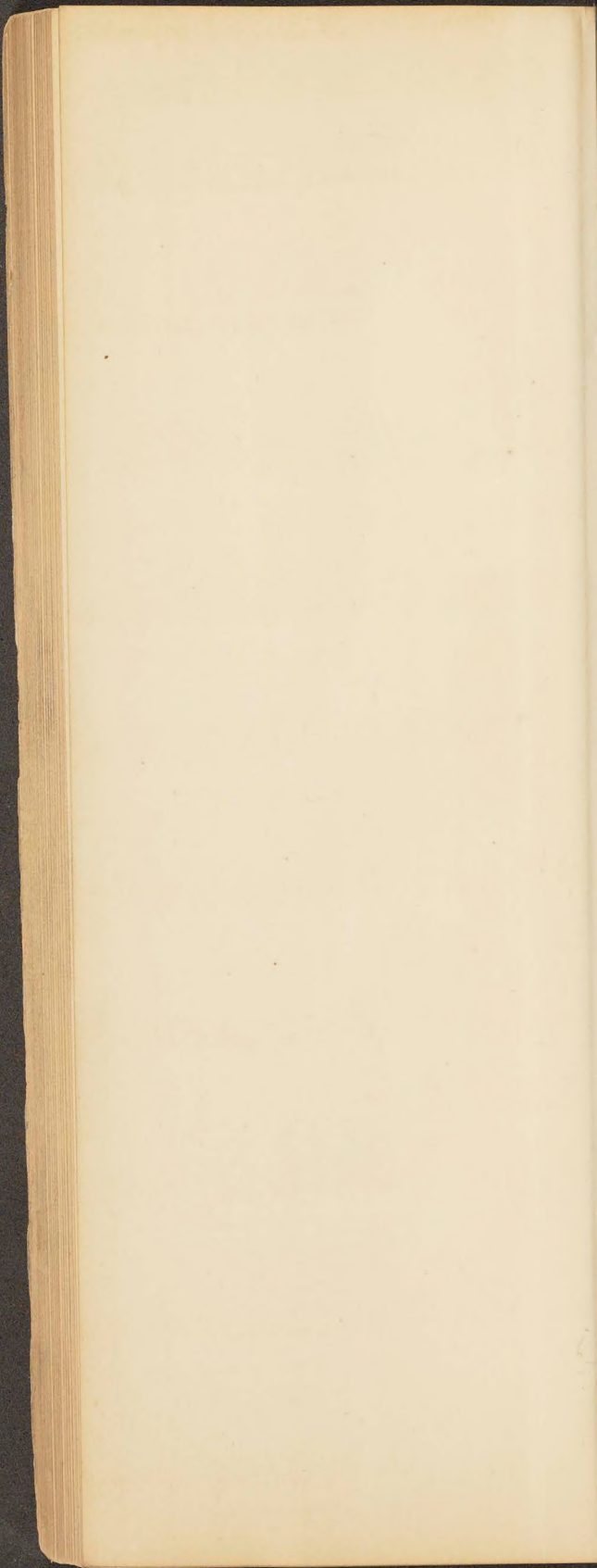
B. fuses on thin edges to greenish gray enamel; decomposed
 o \$1.50 for good specimens.

als and in foliated aggregates, lining the walls of cavities or
 e grouped around a central core of manganiferous mineral.
 red whence its name, exfoliates slightly and on continued
 ives Mn reaction with fluxes and on charcoal gives coating of
 e, &c., at Stirling Hill, N. J. Good specimens 15c. to \$2.00.

sive, dark green, hardness, 1. Fus. 3. Sp. Gr. 2.79; resembles

ed in the catalogue, page 37. On this page also which is the
 ed minerals. In cases where a mineral is named all that one
 o find the name in the alphabetical list where it is preceded
 per order in the table of mineral species, and after it most of





The numbers given in these columns are Dana's Species Numbers.
 The following are the abbreviations that indicate color:
 1 White; 2 black; 3 red; 4 green; 5 yellow; 6 blue; 7 gray;
 16 brass; 17 purple; 18 pinchbeck; 19 pale; 20 velvet; 21 dark;
 pomgranate; 31 pearl; 32 hyacinth; 33 azure; 34 olive; 35 loek;
 peach; 43 apple; 44 ochre; 45 honey; 46 straw; 47 ash; 48 flesh;
 orange; 57 brick; 58 violet or purple; 59 wax; 60 snow; 61 liver
 colorless; 69 light; (—all colors). Letters indicate unnumbered

1	1	1	1	2	2	3	3	4	4
1 A	295 A	430	681	25	377 A	12	392	56	41
2	297	430 A	685	32	411	19	394	141	41
4	293	432	688	40	425	20	404	142	41
6	299	433	689	40 C	435	26	404 E	150	41
7	300	434	693	52	436	49	406	153	42
8	301	446	695	56	437	51	411	153 A	42
9	302	451	697	58 A	438	57	413	173	42
10	303	459	711	59	439	64	414	174	42
11	304 A	470 A	715	60	440	71	417	183	42
14	305	490	716	70	443	72	418	185	42
17	309	490 D	717	76	452	85	420	203	42
18	310	490 F	718	89	456	100 A	420 A	210	42
19	310 A	490 G	719	99	456 A	115	420 E	222	42
20	310 B	492	720	100	458	117	422	225 A	42
21	310 C	493	723	108	458 A	118	427	234	42
24	311	500	724	111	458 B	127 A	425	235	43
35	312	501	726	117	468	132 B	448	236	44
35	313	502	727	120	469	138	450	239	44
37	314	503	728	122 B	473	144	459	238	44
48	314 A	503 B	729	127	474	144 A	461	240	44
50	316	504	730	130	475	146	470	242	44
56	319	515	733	131	476	148 A	471	243	44
73	320	516	735	132	477	149	490 A	245	44
82	321	517	736	134	478	161	492	246	44
83	322	518	737	153	478 A	162	493	254	44
83 A	322 A	520	738	164	479	169	496	259	44
84	323	520 B	739	178	480	172	499	261 A	44
85	324	520 C	740	180	481	176	500	264	45
86	325	522	741	180 A	482	193	503 A	266	45
88	326	523	742	181	449	194	507	273	45
90	327	528	744	182	483	197	526	276	45
91	358	549	745	183	484	198	526 A	276 A	45
92 A	361	550 A	746	184	485	202	531	279	45
93	363	554	748	185	486	204	532	280 A	45
93 A	373 A	556	749	186	490 B	207	549	282	45
94	370	564	753	187	499	208	556	288 A	45
95	370 A	566	772	188	526 C	209	558	289	46
96	371	571	779	188 A	536	212	561	290	46
100 A	372	574	780	189	539	216	562	293	46
102	374	590	784	190	560	218 A	574 A	295	46
135	375	591	785	192	582	226	575	299	46
137	376	592	786	193	585	228	576	300	46
138	376 A	593	794	194	606	231	577	302	46
139	377	594	795	195	610	232	580	304	46
145	378	595	796	196	612	236	581	205	49
146 A	379	595 A	797	198	618	241	611	307	49
147	331	596	805	199	620	240	614	311	49
150	382	597	806	200	623	255	616	312	50
151	383	598	821	201	646	252	617	315	50
160	384	599	822	202	696	252 A	617 A	316	50
163	385	600 A	824	204	701	263	619	319	50
163 A	386	601	832	217	675	266	623 A	320	50
164	387	601 A	Da	218	751 A	269	624	323	52
165	388	602	Ge	218 A	816	270	632	324	52
166	389	603	Frie	218 B	826	272	642	325	52
167	390	604	Vanu	218 D	827	272 A	643	326	53
168	391	614		218 E	830	272 B	656	327	53
169	392	617		221 A	830 A	272 C	659	335	53
170	393	626		235	830 B	272 D	660	335 A	53
179	393 A	627		239	830 C	281	667	345	54
203	394	628		238	830 D	283	671	346	34
208	395	629		240	831	288	687	345 B	54
210	396	630		242	836	294	717	347	54
211	397	631		253	Op	295	721	348	54
212	400	632		253 A	Py	295 A	722	349	54
214	400 A	633		259 A	Va	296	723	357	54
219	401	635		260	Wa	300	724	361	54
220	401 A	637		261	Chal	302	725	332 A	54
221	402	638		261 A	Daub	304	787	363	55
221 A	403	641		233	Lehr	312	793	364	55
222	404	647		276 A		313	810	339	55
228	404 C	650		278		314	811	374	55
229	404 D	652 A		279		316	814	376	55
232	404 E	653		282		319	817	376 B	55
231	405	654		284		322	836	332	55
233	406	655		289		322 A	Ca	383	55
234	406 A	656 A		290		323	Hy	387	55
237	411	657		291		323 A	Py	401	55
237 A	413	658		295		327	Frie	404 C	56
238	418	659		299		333	Calc	405	56
243	419	660		308		350		406	56
244	420	661		324		357		406 A	56
257	420 D	666		320		370		407	56
258	420 E	671		331		378		408	56
274	420 G	672		332		382		409	57
280	420 H	673		333		383		410	57
280 A	422	674		334		386		411	57
288	422 A	677		366		387		412 A	57
293	429	678		369		389		414	58
294	429 A	679		376 B		390		414 A	58

OF COLOR.

Numbers; see Table of Species.

8 brown; 9 pink; 10 copper; 11 lead; 12 steel; 13 iron; 14 tin; 15 bronze; 16 dirty; 24 sulphur; 25 aurora; 26 lemon; 27 cherry; 29 cochineal; 30 sky; 33 verdigris; 37 emerald; 38 grass; 39 pistacio; 40 sky; 41 indigo; 42 blue; 49 lavender; 50 raven; 51 pitch; 52 wood; 53 rose; 54 sea; 55 hair; 56 oil; 62 oil; 63 clove; 64 milk; 65 asparagus; 66 dull; 67 tile; 68 silver; 23 red Species, which may be found on page 37 of the Catalogue.

4	4	5	5	5	6	7	7	7	8	8
415	595 A	1	414	656	34	3	222	575	23	470
415 A	597	22	415 B	659 A	100	5	223	592	33 A	471
416	597 A	27	417	660	153 A	6	234	595 A	56	471 A
417	614	28	420	663	154	13	236	597	56 A	478 A
420	615	49	420 B	671	160	11	237	597 A	57	479
420 D	615 A	54	420 C	672	179	15	238	599	67	484
422	622	56	420 G	678	183	16	249	632	63 A	486
422 A	622 B	57	421	681	194	19	244	635	70	490 A
423 A	634 A	75	423 A	682	203	29	246	638	76	490 B
423 B	636	77	424	683	214 A	29 A	253	640	81 A	490 D
424	641	78	425	684 A	213 D	30	253 A	641	132	493
425	644	79	428	684	233 B	31	257	650	146	494
428	659 A	90	429	685	254	32	258	654	178	496
429 A	662	116	430	687	273	33	262	716	183	497
430	664	121 A	430 A	690	287	34	263	717	190	499
436	668	133	431 A	691	299	33	270	718	192	508
441	669 A	139	442 B	692	300	40	272	719	193	510
442 B	675	141	445 A	693	305	40 C	272 E	720	194	515
443	694	142	445 C	695	306	42	275	721	195	516
444	696	143	446	696	307	43	280	722	196	552
445	701	144	447	708	320	44	285	723	198	553
445 C	702	145	447 A	710	324	45	293	726	203	554
447 A	704	146	461	711	325	46	294	727	204	558
448	705	148	470 A	712	326	47	295 A	728	206	560
448 A	706	144 A	472	718	335	44 A	298	730	207	569
449	709	150	477	719	346	44 B	299	736	208	570
449 A	718	152	484	720	346 A	53	300	737	209	572 A
450	723	161	490 C	723	348	55	304 A	738	213	576
452	728	162	490 D	724	361	58	305	741	218 A	580
453	741	169 A	490 E	728	363 A	59	308	742	232	581
454	747	176	491	730	364	62	309	743	234	582
454 A	750	177	492	731	372	62 A	310	745	235	584
455	751	182	494	732	374	64 A	311	749	240	586
457	751 B	183	495	732 A	393	65	312	772	241	606
458	754	193	496	735	417	65 A	314 A	781 C	246	611
458 A	755	198	497	741	418 A	66 A	315	798	255	613
459	755 A	201 A	501	745	453	73	316	802	262	614
462	772	212	504	749	462	74	321	818	263	616
463	773	215	505	753	465	80	322	820 A	265	620
464	830 C	216	506	755 A	470	81	324	Cl	266	621
465	An	222	507 A	758	470 A	81 A	377 A	Cr	267	623
466	Ba	224	509	772	492	84	382	Mo	269	623 A
467	Ki	225	510	773	498	86	383	Se	272	624
468	Ma	225 A	515	778	499	87	384	Hydr	272 A	634 A
469	Mi	227	516	779	523 A	88	395		272 B	634 B
472	Mo	228	518	783	526 B	92	401		272 C	662 A
478	Zo	231	519	786	526 C	93 A	402		272 D	682
479	Diab	232	531	793	542	95	404		272 E	696
483	Psit	234	532	798	547	97	404 A		272 F	718
484	Rose	237	535	799	551	98	405		273	716
487	Euch	254	537	799 A	552	99	406		274	719
488		259 A	550 A	799 B	554	101	407		276	721
489		265	554	800	554 C	103	411		278	722
490		266	556	801	563	104	412 A		283	731
491		267	557	802	574 B	105	414 A		285	732
493		268	558	807	595 A	106	417		277	751 A
496		271	559	813	630	107	418		293	778
498		273	560	818	631	109	419		295	781
499		274	569	828	634 A	110	420		311	781 A
500		275	570	837	636	111	420 F		319	781 B
501		276	572 A	He	639	112	420 G		320	781 C
502		281	573	Hv	659 A	112 A	420 H		323	793
503		286	573 A	Mi	665	113	422		330	798
504		288	573 B	Py	668	113 A	423		331	799
505		292	580	To	669	114	426		333	803
506		304	581	Ihle	639 A	119	429		360	807
507		305	584	Hydr	670	121	433		359	807 A
508		312	586		700	121 A	442 B		365	810
509		319	587		702	122	448		366	811
510		322	594		703	123	448 A		368	812
511		322 A	595		723	124	458		369	814
512		325	595 A		724	125	458 A		380	817
513		327	597 A		743	128	459		385	819
514		328	605		750	129	459 B		404 A	825
515		356	615 A		750 A	132 A	459		415 B	826
516		360	616		752	132	490		419	830
517		361	617		704	132 B	490 D		422	830 C
518		373	621		An	134	498		424	830 D
519		374	622		Chal	135	500		427	Hy
520		376 B	623			136	503		431 A	Mi
521		380	623 A			140	503 B		435	Py
522		383	624			160	507 A		437	Wa
523		387	626			173	520		440	Achr
524		392	630			178 A	521		442	Rose
525		393	635			179	528		445 A	
526		395	638			180	549		447	
527		401 A	640			203	550 A		447 B	
528		4 7	641			205	554		453	
529		411	650			210	556		451	
530		413	652 A			218	564		458	





TABLE OF

9	10	11	11	12	12	13	14	15	16	17
1 A	12	15	112	3	119	13	7	39	75	
243	49	29	112 A	5	121	25	17	54	78	
244	51	30	113	6	121 A	41	18	66	He	
254	71	42	122	16	132 A	52	19	68		
304 A	72	43	122 B	29	180 A	58 A	21	77		
320	132 B	44	123	31	205	60	37	79		
371	290	44 A	124	33	Cl	89	48	93 A		
745		44 B	125	38	Ta	108	82	211		
		45	127 A	53		120	83	290 A		
		46	128	62		127	83 A	292		
		47	129	62 A		130	93 A	407		
		58	134	74		131	96	459 A		
		65	135	80		132	102			
		65 A	223	81		182				
		65 A *		81 A		186				
		93 A		87		188				
		101		97		189				
		103		98		199				
		105		104		201				
		106		110		458 B				
		107		113 A		453 B				
		109		114		485				

25	26	27	29	31	32	33	34	35	36	37
26	27	226	118	140	115	306	259	153	533	18
573	143	277	172	235	642	346 A	288 A	376 B	541	16
573 B	622	367		420 F	643	551	346 B	428	545	24
	710				787		348	436	546	32
							349	441	554 B	34
							409	444	583	41
							410	455	636	42
							449	457	709	44
							454	490	751 B	46
							457	534		53
							460	536		55
							467	540		54
							535	553		54
							536	568		54
							565	572		49
							582	615		52
							615			57
							620			70
							622			70
							641			71
										75
										75

47	48	49	51	52	53	54	56	57	58	59
262	270	418 A	253	359	241	409	23	323 A	238 B	27
280	313	499	253 A		255	455 A	28	674 A	537	57
423	314	526 B	438		294	492	69	632	663	57
721	316		Va		296	502	116	656	231	61
	387				370		176		159	73
	449				404 E		224			77
	667	50			406		356			
					427		503 A			
					526 A		531			
					657		639			
		456			722		837			
		456 A					Hy			

Collections Illustrated

Twenty-five specimens in box, \$1.00. Fifty specimens in box, \$5.00. Fifty large specimens, \$10.00.

18	19	19	21	21	22	23	23	23	24
63 81 A	56 A 90 214 A 252 A 275 288 298 335 448 A 519 521 525 552 555 559 561 532 574 B 634 A 635 690 693	694 727 801 813 Ma To	57 89 117 122 A 127 A 141 173 178 A 204 238 B 242 261 290 368 400 409 437 444 447 B 449 449 A 454	454 A 467 468 507 526 543 547 564 567 568 574 A 582 622 B 623 623 A 625 631 636 675 732 781 A 798	410 412 A 501	137 138 151 163 A 163 B 168 175 231 232 234 A 238 254 256 266 267 272 295 A 297 301 302 303 305 A	310 315 316 325 327 361 370 382 383 385 387 388 393 A 491 523 562 635 A 652 654 659 A 661 673	715 724 727 780 805 A 824 833 834 Mi Ni	22 224 509 557 573 683 712

37	33	39	40	41	42	43	44	45	43
138 153 245 326 345 416 420 A 445 463 534 538 540 541 545 448 544 572 701 705 747 751 755	462 508 539 544 548 555 572 706 751	174 276 408 490 538 615 709	154 542 563 659	100 525	526 668	280 A 347 333 400 416 445 433 527 529 546 550 565 A 572 A 583 754 Ba Ma	169 330 634 637 691	69 152 323 376 B 501 506 537 633 634 825	373 692

59	60	61	62	63	64	66	67	63	71
271 273 A 277 245 232 A 73	166 310 C 409 A 522	442 468 520 B	363 411	285 330 337 496 632 A 799 B	147 232 403 490 F 490 G 554 C 574 690 A Ge	278 231 315 365 441 455 725 803	122 A 161 191	6 9 19 35 36 50 91 92 A 93 94 401 A	122 B 237 A 246 A

strating Color.

Specimens in box, \$3.00. One hundred specimens





TABLE OF

SCALE OF HARDNESS.—1 Talc; 2 Gypsum; 3 Calcite; 4
10 Diamond. Price of 9 Specimens in box 50 cents; with file,
those given in the "Table of Specimens."

H. < I.	1-1.5	1.5-2	2-2.5	2.5-3	3-3.5	3.5-4
409	34	31	1	12	17	
51	25	30	2	119	132	
123	140	25	131	29	39	
527	683	22	112	112	37	
218 E	224	26	130	108	18	
404	602	27	29	104	78	
419	447	226	129	44	66	
40 C	419	139	104	49	199	
122 B	401	117	64	61	729	
149	400	100	20	199	633	
333 A	452	526	199	221	178	
795 A	99	664	22	118	407	
830 F	63	524	220	642	290	
447 A	218 E	224	669	672	726	
447 B	141	591	226	294	632	
600 A	546	653	666	738	630	
Ap. 2-58	685	137	674	599	631	
522	736	654	138	630	168	
778	737	516	656	164	413	
779	673	683	640	168	374	
780	594	119	402	294	715	
781	447	401	293	212	747	
782	694	210	749	708	346	
793	695	452	346	346	69	
795	420	218 B	414	411	411	
797	375	15	289	288	459	
805 A	418	32	293	429	113	
820	357	92	450	448	105	
821	449	219	831	45	132	
826	429 A	136	47	41	48	
831	404 E	145	65	46	120	
514 B	454 A	133	458 B	43	106	
404	335 A	546	21	58	111	
405	288 A	548	98	107	101	
406	772	570	58 A	128	79	
410	784	590	108	60	51	
455 A	785	673	114	62	66 A	
	787	671	124	9	510	
	807	596	221 A	142	619	
	821	520 A	650	197	643	
	830 B	445 A	142	700	150	
	830 C	495 B	197	733	616	
	831	420	638	641	620	
	401 A	375	151	635	153 A	
	404 E	418	542	644	752 A	
	420 C	465	154	621	541	
	430 A	322 A	572	644 A	622	
	454	357	581	547	691	
		449	558	702	684	
		1 A	668	218 A	580	
		14	687	581	569	
		23	524	646	456	
		28	436	682	292	
		29 A	629	428	439	
		115	660	449	537	
		116	655	627	595	
		688 A	658	629	445	
		30 A	739	659 A	601	
		65 B	520	739	432	
		335 A	170	165	422	
		177	663	532	564	Ap-1
		223	518	595 A	376	
		288 A	573	446	69	
		529	447 B	440	708	
		662	252	434	416	
		800	295	411	408	
		817	647	647	64 A	
		830 A	422	211	68 A	
		830 B	323	218 D	Ap. 2-16	
		831	214	408	429 A	
		420 C	462	135	218	
			448	178 A	526 C	
			23	448 A	456 A	
			520 C	416 A	617	
			572 A	656 A	645	

F HARDNESS.

Fluorite; 5 Apatite; 6 Feldspar; 7 Quartz; 8 Topaz; 9 Corundum;
e, magnet and porcelain plate for testing streak \$1.00. The numbers are

5-4	4-4.5	4.5-5	5-5.5	5.5-6	6-6.5	6.5-7	7-10
17...	3...	13...	83...	94...	75...	231...	49..
39...	68...	199...	85...	93...	90...	7...	325...
37...	199...	643...	71...	30...	30...	263...	269...
18...	205...	499...	94...	186...	186...	597...	285...
101...	586...	496...	93...	284...	259 A	262...	320...
125...	752...	597...	81...	298...	260...	614...	179...
80...	159...	492...	217...	217...	196...	285...	191...
199...	597...	237...	202...	202...	188...	320...	183...
494...	386...	386...	181...	188...	7...	276...	230...
493...	459...	269...	206...	181...	474...	269...	323...
617...	390...	361...	190...	189...	180...	273...	231...
536...	461...	411...	610...	180...	260...	202...	287...
153...	118...	461...	304 A	284...	241...	324...	272...
701...	7.2...	614...	597...	298...	248...	323...	254...
172...	719...	5...	339...	241...	597...	259...	185...
751...	721...	93 A	370...	304 A	363...	192...	334...
553...	411...	88...	383...	597...	311...	193...	269...
721...	110...	539...	199...	503 B	244...	333...	326...
168...	38...	544...	329...	527...	243...	310...	267...
343...	97...	545...	247...	378...	316...	286...	24...
392...	55...	425...	226...	579...	315...	331...	89...
394...	77...	369...	324...	305...	314...	282...	335...
241...	200...	249...	723...	304...	280...	257...	598...
554...	567...	495 A	266...	299...	276...	4...	855...
724...	538...	370...	204...	238...	324...	74...	
716...	535...	381...	206...	324...	323...	284 A	
718...	289 A	377...	202...	367...	319...	309 A	
728...	499...	341...	572...	309...	458...	Ap. 2-63.	
722...	425...	495...	411...	458...	192...	281...	
721...	611...	556...	194...	98...	232...		
717...	335...	550 A	234...	246...	84...		
56...	753...	228...	245...	235...	188 A		
346...	495 A	560...	95...	86...	187...		
411...	371...	161...	92...	72...	182...		
459...	389...	345...	92 A	89...	263...		
127...	372...	366...	145...	82...	261 A		
35...	283...	490...	530...	478...	240...		
52...	553...	81 A	242...	483...	503...		
76...	575...	83 A	503 A	242...	271...		
121...	421...	171...	495...	270...	344...		
54...	163 A	370 A	307 A	307...	253...		
619...	227...	268...	306...	107 B	310...		
6...	228...	362...	308...	255...	305 A		
540...	731...	531...	297...	310 B	277...		
701...	161...	554 B	274...	396...	314 A		
752 A	160...	554 C	468...	228...	313...		
541...	346 A	561...	332...	Ap 1-11.	574...		
592...	408...	577...	265...	549...	568...		
596...	490...	438...	373...	554 C	481...		
569...	16...		565...	481...	356...		
613...	56 A		555...	321...	257...		
524...	57...		584...	480...	479...		
490 C	96...		228...	471...	4...		
166...	478 A		496...	72 A	284 A		
167...	587...		258...	173...	314 A		
595...	541 A		480...	231 B	272 F		
591...	362...		73...	245...	330...		
264...	370...		174...	276 A	475...		
389...	382...		595 A	384...	559...		
371...	395...		377 A	475...			
1-13	397...		577...	486...			
32 A	484...		365...	502...			
116...	832...		470...	837...			
108...	508...		485...	559...			
70...	509...		502...				
32 B	423 A		504...				
507 A	438...		506...				
184...			836...				
521...			518 A				
517...			559...				
554 A			561...				
575...							
519...							
137...							
163...							





CLASSIFICATION OF

ACCORDING TO THE CRYSTALLOGRAPHIC

NAMES OF SYSTEMS.—I. Isometric; II. Tetragonal; III. Orthorhombic; IV. Monoclinic; V. Triclinic; VI. Hexagonal; VII. Rhombohedral; VIII. Trigonal; IX. Tetrahedral; X. Cubic; XI. Dodecahedral; XII. Icosahedral; XIII. Amorphous, stalactitic and massive, granular, pseudomorphous.

CRYSTALLOGRAPHIC SERIES (illustrating the six systems).—25 series, \$50.00.

I.	I.	II.	III.	III.	IV.	IV.	V.
2	10	78	17	622	131	325	
1	188 A	196	71	691	132	322	
12	187	483	31	684	94	191	
3	219	617	18	456	93	724	
13	142	370	64	369	29	728	
8	141	299	66	370	119	204	
83	154	614	68	255	112	461	
85	146	273	90	344	129	319	
101	558	192	20	305 A	130	259	
125	675	193	180	689	104?	293	
40	673	194	181	584	61	459	
44	307 A	614	25	214	30	288	
49	271	272	7	731	259 A	429	
81	270	99	64	69	260	400	
75	307	145	118	161	284	234	
186	306	136	117	345	199	246	
188	308	733	494	448	205	235	
189	163 A	150	493	451	497	2-7	
182	366	616	100	267	473	333	
190	24	572	672	28	474	325	
220	89	660	683	122 A	22	113	
139	96	166	721	135	27	105	
140	173	167	180	177	221	107	
172	174	371	290?	83 A	729	137	
269	181 A	297	591	148 A	633	97	
674	56 A	274	304 A	231 B	536	95	
137	138 A	228	492	234 A	153	93 A	
133	309 A	422	304	288 A	178	92	
159	365	321	386	335	543	92 A	
597	472	490	320	349	553	58	
305	577	163 B	226	362	499	58 A	
383	598	272 F	230	370 A	493	120	
56	676	298	179	376 B	568	106	
572	837	470	723	384	284	112	
309		475	266	393	298	373	
185		572 A	210	393 A	260	2-4	
183		484	715	397	294	331	
218 D		506	716	634 A	661	695	
15		617 A	718	635 A	656?	564	
5		805 A	722	573 C	632	565	
127		828	719	485	630	418	
110		832	721	500	631	560	
84			717	504	164?	481	
86			196	583	516	732 A	
88			289	634	378	Ap. 1-16	
45			452	634 A	262	282	
41			448	635 A	363	258	
48			231	636	392	257	Ap.
123			254	639	447?	480	
111			21	645	294	479	
89			32	652	390	35	
52			72	662	280	101	
76			66 A?	745	361	60	
55			133	794	554	121	
77			143	824	203	124	
82			638	836	219	102	
54			621	Clar.te.	401	62	
9			548		293	63	

OF THE SPECIES

CRYSTALLINE FORM.

rhombic; IV. Monoclinic; V. Triclinic; VI. Hexagonal.
s. F. Fibrous, micaceous and scaly.

Specimens, \$1.00. 50 Specimens, \$10.00. 100 Specimens,

IV.	V.	V.	VI.	A.	A.	F.
478	610	240	503 B	37	165	407
221 A	298	736	311	39	170	409
650	34?	659	249	80	532	602
145	26?	659 A	285	217	595	459
510	226	658	315	202	598 A	123
643	642	739	314	206	307 L	103
635	644	520	324	586	468	570
151	751	503 A	242	402	396	685
620	752	573 B	594	413	446	669
546	526	671	503	316	440	524
540	664	495	310 B	688	252	407
701	524	495 A	445 A	374	253	428
702	610	518	310	749	334	359
535	248	520 A	286	747	332	249
289 A	738	445?	669	218	601	596
263	599	277	241	346	Ap. 1-11	381
261 A	654	313	653	367	694	447
292	640	730	14	414	556	447 B
224	168	496	152	232	571	495 B
624	327	326	175	831	549	459 A
590	379	127 A	268	830	550 A	434
737	343	200	290 A	38	555	411
627	237	805 A	382	47	575	432
629	339	541 A	445 C	65	Ap. 1-13	247
655	394	520 C	456 A	458 E	574	422
537	244	502	6-8 A	42	554 C	566
663	243	531	Milar- ite.	46	421	323
666	329	573 A		50	420	359
573	316	Vestan.		43	375	357
377	276			103	404	433
389	238			79	419	687 A
372	247			51	376	595 A
341?	551			80	465	459 B
283?	323			218 E	647	
295	740			201	422	
265	450			619	322 A	
121	458?			567	211	
169	198			539	741	
171	98			538	743	
238 A	107			544	218 D	
245	128			545	228	
276 A	108			146	229	
281	114			752 A	708	
330	200			218 A	568	
348	700			581	160	
445 D	641			570	346 A	
477	644 A			688	340	
p. 2-16	644			646	462	
634 B	547			692	416	
656 A	542			580	408	
486	541			596	356	
521	527			436	449	
522	687			449	471	
523 A	682			425	232	
529	530			439	225	
530	499?			336	208	
634 B	613			753	600 A	
663	611			490 C		





TABLE OF SP

Specific Gravity ranges from Water 1 to Iridosmine 1
50 Specimens, mostly crystalized, in box \$5.00.

<-2	2-2.5	5-3	2.5-3	3-3.50	3-3.50
25	669	526	447 B	298	292
22	683	524	244	553	242
13 J	591	407	283	530	240
650	738	294	252	290	573
409	138	656	295	164	270
653	654	40	253	159	468
831	378	632	310	492	Ap. 1-1
830	379	163	305 A	503 B	247
664	343	304 A	373	294	555
672	305	597	286	459	560
409	383	492	601	243	160
661	386	327	434	320	321
674	392	304	411	280	258
137	394	237	432	461	326
599	447	339	264	230	267
602	413	370	214 A	323	265
516	390	363	313	322	277
688	316	299	689	718	228
374	554	311	549	26	284
736	2' 2	244	575	27	218
594	210	316	647	701	345
402	740	315	422	568	356
650	346	314	743	248	257
668	414	314 A	568	329	269
685	309	247	346 A	285	28
425	232	689	340	276	57
590	548	419	448	269	169
727	581	418	357	273	218
627	687	401	433	238	238
739	682	293	449	361	238
663	692	715	451	203	245
673	580	724	208	325	246
6 1	425	716	56 A	719	454
666	359	717	109 A	218	573
596	660	747	171	492	526
694	659 A	411	233	461	572
371	518	459	163 B	319	Ap. 2-6
421	307 A	288	237 A	289	268
376	381	429	448 A	293	335
408	377	400	370 A	234	362
23	389	450	Ap. 2-13	246	435
175	372	452	429 A	546	443
805 A	307	448	442 B	691	460
830 F	306	231	600 A	684	502
688 A	308	287	377 A	530	521
405	341	254	656 A	369	526
515	495	218 E	Ap. 2-63	439	528
662	391	542	652 A	249	531
663	396	596	401 A	490 C	554
667	447	524	415	165	559
772	695	291	418 A	167	561
778	564	449	420 E	595	574
779	565	629	423 B	495	598
780	550 A	655	424	495 A	697
781	Ap 1-13	520	427	503	705
781 A	554 C	166	431	573	Andr.
781 B	420	520 A	437	271	Hypo.
781 C	375	371	454	259	Vall.
782	163 A	370	456 A	235	Zono.
783	418	307 B	463	76	
787	404	255	500	540	
793	465	297	504	153 A	
794	322 A	274	529	702	
798	741	310 B	550	572	
799	214	446	554 B	622	
799 A	462	445	554 C	558	
800	231 A, B	445 A	562	569	
	520 C	440	575	456	

19-21. 25 Specimens, illustrating Specific Gravity, in box \$1.00.

	3.50-4	4-4.5	4.5-5	5.-5.5	5.5-6.5	6.5-7.5	7.5-21
238	132	29	125	17	83	13	
284	104	125	49	119	71	1	
239 A	78	81	186	101	93	3	
217	80	68	180	61	40	37	
206	298	75	188	66	610	39	
701	269	90	220	479	190	2	
751	205	186	118	474	494	12	
752	217	196	226	483	493	8	
721	202	199	105	221	617	64	
499	189	217	106	117	572	93	
498	182	180	107	140	192	31	
259 A	536	181	108	644	84	44	
269	153	34	55	172	97	473	
241	543	226	51	178	93 A	572	
631	284	586	200	551	92	38	
503 A	260	100	145	196	65	47	
262	726	224	133	113	458 B	45	
324	723	630	141	131	45	41	
179	266	367	700	85	43	46	
191	547	185	539	94	99	48	
749	538	120	228	18	72	58	
361	544	101	496	129	60	98	
728	56	121	366	130	124	32	
722	204	79	480	30	103	616	
721	193	82	126	190	136	20	
56	198	66 A	127 A	642	510	64	
206	272	54	178 A	729	641	218	
A 458	110	145	478 A	633	151	5	
A 194	127	188 A	272 F	614	150	58 A	
B 198	52	187	472	95	621	35	
333	77	332	485	86	613	10	
A 225	63	69	573 A	88	611	201	
183	545	481	645	112	753	7	
C 221 A	541	161		111	229	9	
C 219	263	732 A		478	83 A	1 A?	
A 567	261 A	479		143	89	4	
3. 752 A	537	490		142	223	15	
535	556	29 A		141	72 A	64 A	
570	227	121 A		609	635 A	72 A	
289 A	731	132 B		643	577	177	
499	282	135		644	475	Tammite	
334	471	180 A		644 A	577		
331	16	181 A		620	635 A		
730	81 A	225 A		92 A			
56	222	472		21			
B Ap. 1-16	68 A	506		128			
24	496 A	508		123			
76	595 A	509		624			
173	281			613			
284 A	365			336			
507 A	634			114			
A 587	Agnesite			89			
541 A	Bism			62			
276 A				733			
330				635			
365				638			
470				73			
484				96			
598				122 A			
Pyro				152			
				174			
				624 A			
				486			
				619			
				636			



